

# Nomenclature for factors of the HLA system, 2002

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The WHO Nomenclature Committee for Factors of the HLA System met in Victoria, Canada in May 2002 after the 13th International Histocompatibility Workshop to consider additions and revisions to the nomenclature of HLA specificities following the principles established in previous reports (WHO Nomenclature Committee, 1968, 1970, 1972, 1975, 1978, 1980, 1985; Bodmer *et al.*, 1989, 1990, 1991, 1992, 1994, 1995, 1997, 1999; Marsh *et al.*, 2001).

The main subjects discussed were:

- 1 Naming of additional genes within the HLA region.
- 2 Naming of additional alleles.
- 3 Renaming of alleles and removal of incorrect alleles.
- 4 Extension of HLA allele names.
- 5 Naming of alleles with aberrant expression.
- 6 Naming of HLA-G isoforms.
- 7 Killer Immunoglobulin-like Receptor (KIR) gene and allele nomenclature.
- 8 The IMGT/HLA Sequence Database.
- 9 New committee members.

## **1. Naming of additional genes within the HLA region**

A number of class I and II gene fragments within the HLA region have been previously described but had yet to be named. Official designations were given to these gene fragments. Three class I gene fragments, previously called HLA-30 (Geraghty *et al.*, 1992), HLA-17 (Geraghty *et al.*, 1992) and HLA-X (Vernet *et al.*, 1993) are now named HLA-N, HLA-S and HLA-X respectively. An HLA class I gene fragment located within the HLA class II region previously called HLA-Z1 has been officially named HLA-Z (Beck *et al.*, 1996).

An HLA class II pseudogene found centromeric to the pseudogene HLA-DPB2 and most closely related to HLA-DPA2 has been named HLA-DPA3 (Stephens *et al.*, 1999).

The names LMP2 and LMP7 used previously for the two proteasome genes in the HLA class II region have been renamed by the Human Genome Nomenclature

Committee (HGNC) PSMB9 and PSMB8 respectively (Wain *et al.*, 2002). After discussion with the HGNC it was decided to keep the names TAP1 and TAP2 as the official names for the two transporter genes and the names ABCB2 and ABCB3 as aliases for these genes. More information can be found on the HGNC's web site ([www.gene.ucl.ac.uk/nomenclature/](http://www.gene.ucl.ac.uk/nomenclature/)).

The list of those genes in the HLA region considered by the WHO Nomenclature Committee is given in Table 1.

## **2. Naming of additional alleles**

### **a. Conditions for acceptance of new allele sequences**

As emphasised in previous reports, there are required conditions for acceptance of new sequences for official names.

- 1 Where a sequence is obtained from cDNA, or where PCR products are subcloned prior to sequencing, several clones should have been sequenced.
- 2 Sequencing should always be performed in both directions.
- 3 If direct sequencing of PCR amplified material is performed, products from at least two separate PCR reactions should have been sequenced.
- 4 In individuals who are heterozygous for a locus, and where one of the alleles is novel, the novel allele must be sequenced in isolation from the second allele. Thus an allele sequence which is derived using a sequence based typing (SBT) methodology, where both alleles of a heterozygous individual are sequenced together, is insufficient evidence for assignment of an official designation.
- 5 Sequence derived solely from the primers used to amplify an allele should not be included in the submitted sequence.
- 6 Where possible, a novel sequence should be confirmed by typing of genomic DNA using a method such as PCR-SSOP or PCR-SSP. Where a new sequence contains either a novel mutation or a previously unseen combination of nucleotides (sequence motif), this must be confirmed by a DNA typing technique. This may require the use of newly designed probes or primers to cover the new mutation, these reagents should also be described.

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**Table 1.** Names for genes in the HLA region considered by the WHO Nomenclature Committee

| Name <sup>a</sup> | Previous equivalents           | Molecular characteristics   | References                      |
|-------------------|--------------------------------|---|---------------------------------|
| HLA-A             | —                              | Class I $\alpha$ -chain   |                                 |
| HLA-B             | —                              | Class I $\alpha$ -chain   |                                 |
| HLA-C             | —                              | Class I $\alpha$ -chain   |                                 |
| HLA-E             | E, '6.2'                       | associated with class I 6.2-kB Hind III fragment                          |                                 |
| HLA-F             | F, '5.4'                       | associated with class I 5.4-kB Hind III fragment                          |                                 |
| HLA-G             | G, '6.0'                       | associated with class I 6.0-kB Hind III fragment                          |                                 |
| HLA-H             | H, AR, '12.4', HLA-54          | Class I pseudogene associated with 5.4-kB Hind III fragment               |                                 |
| HLA-J             | cda12, HLA-59                  | Class I pseudogene associated with 5.9-kB Hind III fragment               |                                 |
| HLA-K             | HLA-70                         | Class I pseudogene associated with 7.0-kB Hind III fragment               |                                 |
| HLA-L             | HLA-92                         | Class I pseudogene associated with 9.2-kB Hind III fragment               |                                 |
| <b>HLA-N</b>      | HLA-30                         | Class I gene fragment associated with a 1.7 kb Hind III fragment          | (Geraghty <i>et al.</i> , 1992) |
| <b>HLA-S</b>      | HLA-17                         | Class I gene fragment associated with a 3.0 kb Hind III fragment          | (Geraghty <i>et al.</i> , 1992) |
| <b>HLA-X</b>      | HLA-X                          | Class I gene fragment   | (Vernet <i>et al.</i> , 1993)   |
| <b>HLA-Z</b>      | HLA-Z1                         | Class I gene fragment located within the HLA Class II region              | (Beck <i>et al.</i> , 1996)     |
| HLA-DRA           | DR $\alpha$                    | DR $\alpha$ chain   |                                 |
| HLA-DRB1          | DR $\beta$ 1, DR1B             | DR $\beta$ 1 chain determining specificities DR1, DR2, DR3, DR4, DR5 etc. |                                 |
| HLA-DRB2          | DR $\beta$ II                  | pseudogene with DR $\beta$ -like sequences                                |                                 |
| HLA-DRB3          | DR $\beta$ III, DR3B           | DR $\beta$ 3 chain determining DR52 and Dw24, Dw25, Dw26 specificities    |                                 |
| HLA-DRB4          | DR $\beta$ IV, DR4B            | DR $\beta$ 4 chain determining DR53                                       |                                 |
| HLA-DRB5          | DR $\beta$ VII                 | DR $\beta$ 5 chain determining DR51                                       |                                 |
| HLA-DRB6          | DRBX, DRB $\sigma$             | DRB pseudogene found on DR1, DR2 and DR10 haplotypes                      |                                 |
| HLA-DRB7          | DRB $\psi$ 1                   | DRB pseudogene found on DR4, DR7 and DR9 haplotypes                       |                                 |
| HLA-DRB8          | DRB $\psi$ 2                   | DRB pseudogene found on DR4, DR7 and DR9 haplotypes                       |                                 |
| HLA-DRB9          | M4.2B exon                     | DRB pseudogene, isolated fragment   |                                 |
| HLA-DQA1          | DQ $\alpha$ 1, DQ1A            | DQ $\alpha$ chain as expressed  |                                 |
| HLA-DQB1          | DQ $\beta$ 1, DQ1B             | DQ $\beta$ chain as expressed   |                                 |
| HLA-DQA2          | DX $\alpha$ , DQ2A             | DQ $\alpha$ -chain-related sequence, not known to be expressed            |                                 |
| HLA-DQB2          | DX $\beta$ , DQ2B              | DQ $\beta$ -chain-related sequence, not known to be expressed             |                                 |
| HLA-DQB3          | DVB, DQB3                      | DQ $\beta$ -chain-related sequence, not known to be expressed             |                                 |
| HLA-DOA           | DNA, DZ $\alpha$ , DO $\alpha$ | DO $\alpha$ chain   |                                 |
| HLA-DOB           | DO $\beta$                     | DO $\beta$ chain  |                                 |
| HLA-DMA           | RING6                          | DM $\alpha$ chain   |                                 |
| HLA-DMB           | RING7                          | DM $\beta$ chain  |                                 |
| HLA-DPA1          | DP $\alpha$ 1, DP1A            | DP $\alpha$ chain as expressed  |                                 |
| HLA-DPB1          | DP $\beta$ 1, DP1B             | DP $\beta$ chain as expressed   |                                 |
| HLA-DPA2          | DP $\alpha$ 2, DP2A            | DP $\alpha$ -chain-related pseudogene                                     |                                 |
| <b>HLA-DPA3</b>   | DPA3                           | DP $\alpha$ -chain-related pseudogene                                     | (Stephens <i>et al.</i> , 1999) |
| HLA-DPB2          | DP $\beta$ 2, DP2B             | DP $\beta$ -chain-related pseudogene                                      |                                 |
| TAP1              | ABCB2, RING4, Y3, PSF1         | ABC (ATP Binding Cassette) transporter                                    |                                 |
| TAP2              | ABCB3, RING11, Y1, PSF2        | ABC (ATP Binding Cassette) transporter                                    |                                 |
| <b>PSMB9</b>      | LMP2, RING12                   | Proteasome-related sequence   |                                 |
| <b>PSMB8</b>      | LMP7, RING10                   | Proteasome-related sequence   |                                 |
| MICA              | MICA, PERB11.1                 | Class I chain-related gene  |                                 |
| MICB              | MICB, PERB11.2                 | Class I chain-related gene  |                                 |
| MICC              | MICC, PERB11.3                 | Class I chain-related pseudogene  |                                 |
| MICD              | MICD, PERB11.4                 | Class I chain-related pseudogene  |                                 |
| MICE              | MICE, PERB11.5                 | Class I chain-related pseudogene  |                                 |

<sup>a</sup> Gene names given in bold type have been assigned or changed since the 2000 Nomenclature report.

- 7 An accession number in a databank should have been obtained. Sequences may be submitted to the databases online at the following addresses:  
EMBL: [www.ebi.ac.uk/Submissions/index.html](http://www.ebi.ac.uk/Submissions/index.html)  
GenBank: [www.ncbi.nlm.nih.gov/Genbank/index.html](http://www.ncbi.nlm.nih.gov/Genbank/index.html)  
DDBJ: <http://www.ddbj.nig.ac.jp/sub-e.html>
- 8 Full-length sequences are preferable though not essential; the minimum requirements are exons 2 and 3 for an HLA class I sequence and exon 2 for an HLA class II sequence.
- 9 Where possible, a paper in which the new sequence is described should have been submitted for publication.
- 10 DNA or other material, preferably cell lines, should, wherever possible, be made available in a publicly accessible repository or alternatively, at least in the originating laboratory. Documentation on this will be maintained by the WHO Nomenclature Committee.
- 11 Submission of a sequence to the WHO Nomenclature Committee should be performed using the online submission tool available at [www.ebi.ac.uk/imgt/hla/subs/submit.html](http://www.ebi.ac.uk/imgt/hla/subs/submit.html). Researchers are expected to

complete a questionnaire relating to the sequence and provide a comparison of their new sequence with known related alleles. If the sequence cannot be submitted using the online web tools, researchers should contact [hla@ebi.ac.uk](mailto:hla@ebi.ac.uk) directly for details of alternative submission methods.

Although at present it is only a recommendation that full-length sequences of the coding region of novel alleles be submitted it was widely felt that this should become in the future a requirement for submission. Such requirement would remove many of the currently encountered ambiguities in the assignment of names to alleles for which partial sequences have been submitted and should not be burdensome as sequencing techniques have improved substantially in the time since the submission conditions were first devised.

It should be noted with some caution that cells from which only partial sequences have been obtained may later be shown to have different or novel alleles when further sequencing is performed. This is of particular importance in cases where partial sequences of what appears to be the same allele have been obtained from several different cells. In such cases, all cells studied have been listed in this report.

Current practice is that official designations will be promptly assigned to newly described alleles in periods between Nomenclature Committee meetings, provided the submitted data and its accompanying description meet the criteria outlined above. A list of the newly reported alleles is published in each month in nomenclature updates in the journals *Tissue Antigens*, *Human Immunology* and the *European Journal of Immunogenetics*. The listing of references to new sequences does not imply priority of publication. The use of numbers or names for alleles, genes or specificities which pre-empt assignment of official designations by the Nomenclature Committee is strongly discouraged.

#### **b. New allele sequences**

A total of 209 HLA alleles have been named since the last report (Marsh *et al.*, 2001). The newly named alleles are shown in bold typeface in Tables 2 to 10. For HLA class I, 42 HLA-A, 79 HLA-B and 19 HLA-C alleles were named, making a total of 881 class I alleles with official names. For HLA class II, 52 HLA-DRB, one DRA, one DQA1, eight DQB1, one DPA1 and six DPB1 alleles were named, making a total of 611 class II alleles with official names. Three MICA alleles were named bringing their total to 54 (Table 11). The total number of alleles at each locus assigned with official names as of 31st July 2002 is given in Table 12.

As the database of HLA allele sequences has expanded, it has become increasingly difficult to maintain consistent linkage between allele names assigned on the basis of nucleotide sequences and the serological profiles of the encoded proteins. These difficulties are in part technological and part due to the inherent biological properties of the HLA system. In the first category is the increasing emphasis on DNA technology and consequent lack of a

serological description for many newly discovered HLA alleles. In the second category is the finding that a newly defined antigen does not comfortably place within any known serological grouping. This is especially true of the DRB1\*03, \*11, \*13, \*14 and \*08 family of alleles, for which the description of new alleles has revealed a continuum of allelic diversity rather than five discrete sub-families. It should be stressed that, although a goal is to indicate the serological grouping into which an allele will fall, this is not always possible. That most importantly the allele name should be seen as no more than a unique designation.

#### **3. Renaming of alleles and removal of incorrect alleles**

There was discussion on the renaming of several HLA class I alleles, stimulated by the more extensive nucleotide sequence information obtained subsequent to the official naming of the alleles based upon partial sequences. For three alleles it was agreed that they had been named inappropriately and a decision was therefore made to rename them as follows: A\*2416 becomes A\*3108, B\*1522 becomes B\*3543, and B\*1559 becomes B\*3544. These three examples vividly illustrate the problems inherent in naming sequences consisting of just exons 2 and 3 of HLA class I alleles. Determination of longer sequences, full coding sequences or more, should avoid future assignment of inappropriate names and lead to more accurate and interesting interpretation of the sequence data.

It has been accepted that the nucleotide sequence designated as the Cw\*1301 allele was in error and so this designation has been deleted. There is also some doubt as to the validity of certain of the HLA-E allele sequences, which is currently being investigated. A comprehensive list of all the allele names which have been deleted is given in Table 13.

#### **4. Extension of HLA allele names**

The convention of using a four digit code to distinguish HLA alleles that differ in the proteins they encode was first implemented in the 1987 Nomenclature Report (Bodmer *et al.*, 1989). In 1990 a fifth digit was added to permit the distinction of sequences differing only by synonymous (non-coding) nucleotide substitutions within the exons (Bodmer *et al.*, 1991). When these conventions were adopted it was anticipated that the nomenclature system would accommodate all the HLA alleles likely to be sequenced. Unfortunately that is not proving to be the case, as the number of alleles for certain genes is fast approaching the maximum possible with the current naming convention.

In particular there are three problem areas; firstly the fifth digit, used for synonymous substitutions, can distinguish only nine variants of an allele. Already there are six named variants of the A\*0201 allele: A\*02011 to A\*02016, and eight variants of the G\*0101: G\*01011 to G\*01018. The second problem area concerns the third

and fourth digits used to distinguish up to 99 variants within the allele families defined by the first and second digits. The first allele family to exceed 99 named alleles is likely to be the B\*15 family for which 73 variants have been named to date, soon followed by the A\*02 and DRB1\*13 families for which over 50 allele variants have already been named. The most immediate problem concerns the DP genes, for which the decision was taken in 1989 to name all alleles which differ by non-synonymous (coding) substitutions with different combinations of the first two digits, a system that can only accommodate 99 alleles (Bodmer *et al.*, 1990). The most recently assigned name was DPB1\*9201, so that once an additional eight coding sequences have been reported there will be no capacity left in this system for naming newly discovered DPB1 alleles.

There was much discussion of this topic. Several different options were considered including the splitting up of the allele names into discreet fields separated by colons or semi-colons. This option while it would have no limit to the number of names available, was in the end considered by the committee to be too radical and disruptive a solution for the problems at hand. It was therefore decided to seek solutions with minimal change to the existing format of the alleles, so as to limit the changes that would have to be made to existing database structure. The following decisions were taken to solve the three major problems.

- a. To introduce an extra digit between the current fourth and fifth digit, to allow for up to 99 synonymous variants of each allele. This expands the full allele name to eight digits, the first two digits defining the allele family and where possible corresponding to the serological family, the third and fourth digits describing coding variation, the fifth and sixth digits describing synonymous variation and the seventh and eighth digits describing variation in introns or 5' or 3' regions of the gene.
- b. In cases where the total number of coding variants exceeds 99, a second number series will be used to extend the first one. For example for the B\*15 family of alleles, the B\*95 series will be reserved and used to code for additional B\*15 alleles. Consequently the next B\*15 allele to be named following B\*1599 will be B\*9501. Likewise the A\*92 series will be reserved as a second series for the A\*02 allele family.
- c. For HLA-DPB1 alleles, it was decided to assign new alleles within the existing system, hence once DPB1\*9901 has been assigned, the next allele would be DPB1\*0102, followed by DPB1\*0203, DPB1\*0302 etc.

The introduction of the additional digit for synonymous variation will take place immediately and all allele names which are currently five digits or above will be renamed accordingly, as shown in Tables 2–10. The other changes will only be implemented when necessary, as dictated by submission of novel allele sequences.

## 5. Naming of alleles with aberrant expression

The use of an optional 'N' or 'L' suffix to an allele name to indicate either 'Null' or 'Low' expression was introduced

in previous Nomenclature Reports (Bodmer *et al.*, 1994, 1995, 1997). At this committee meeting there was discussion on the introduction of additional suffixes and concern that some alleles which had previously been given an 'N' suffix should be reconsidered in light of new data indicative of some type of protein expression.

Three new suffixes will be introduced. An 'S' to denote an allele specifying a protein which is expressed as a soluble 'Secreted' molecule but is not present on the cell surface; a 'C' to indicate an allele product which is present in the 'Cytoplasm' but not at the cell surface; an 'A' to indicate 'Aberrant' expression where there is some doubt as to whether a protein is expressed. The first example of a secreted only molecule is that encoded by the newly assigned B\*44020102S allele which by virtue of a single intronic mutation fails to express the transmembrane domain and is therefore produced in a secretory form only. A comprehensive reanalysis of all the alleles which have previously been assigned the Null status will be undertaken and alleles found to fit better into the new categories will be reassigned.

## 6. Naming of HLA-G isoforms

There is evidence of differential splicing of HLA-G that leads to the production of both membrane bound and soluble forms of the same allele. It was felt that while different naming conventions are already being used by researchers in the field, it would be unnecessarily complex to assign official names to all different isoforms produced by expression of a single allele. The committee recommended the use of a lower case 's' or 'm' to indicate 'soluble' or 'membrane' bound as a prefix to the HLA-G allele name. Thus the soluble or membrane bound forms of the HLA-G\*0101 allele, would be described as sHLA-G\*0101 and mHLA-G\*0101, respectively.

## 7. Killer Immunoglobulin-like Receptor (KIR) gene and allele nomenclature

Discussion took place on the naming of the Killer Immunoglobulin-like Receptor (KIR) genes and alleles. While the naming of the genes remains under the remit of the HGNC, it was decided to establish a subcommittee comprising Drs Bo Dupont (New York, USA), Daniel Geraghty (Seattle, USA), Peter Parham (Stanford, USA), Derek Middleton (Belfast, UK) Steven Marsh (London, UK) and John Trowsdale (Cambridge, UK) who will put forward a set of recommendations for the naming of KIR alleles and haplotypes. The recommendations of this subcommittee will be published in a separate report.

## 8. The IMGT/HLA Sequence Database

The IMGT/HLA Sequence Database is the official repository for HLA sequences named by the WHO Nomenclature Committee for Factors of the HLA System (Robinson *et al.*, 2000, 2001). The database contains sequences for all HLA alleles officially recognised by the WHO

Nomenclature Committee for Factors of the HLA System and provides users with online tools and facilities for their retrieval and analysis. These include allele reports, alignment tools, and detailed descriptions of the source cells. The online IMGT/HLA submission tool allows both new and confirmatory sequences to be submitted directly to the WHO Nomenclature Committee. New releases of the database are made quarterly with the latest version (release 1.15.0 July 2002) containing 1482 HLA alleles derived from over 3980 component sequences from the EMBL/GenBank/DDBJ databases. The database may be accessed via the world wide web at [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla).

The IMGT/HLA Database is currently supported by the following organisations: the American Society for Histocompatibility and Immunogenetics (ASHI), the Anthony Nolan Trust (ANT), Biostest, Dynal, European Federation for Immunogenetics (EFI), Forensic Analytical, Innogenetics, the National Marrow Donor Program (NMDP) and Orchid Biosciences. Initial support for the IMGT/HLA database project was from the Imperial Cancer Research Fund and an EU Biotech grant (BIO4CT960037).

## 9. New committee members

The following individuals have been invited to serve on the WHO Nomenclature Committee for Factors of the HLA System: Daniel Geraghty (Seattle, USA), John Hansen (Seattle, USA), Carolyn Hurley (Washington DC, USA), Effie Petersdorf (Seattle, USA) and John Trowsdale (Cambridge, UK).

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The Committee would like to thank James Robinson and Matthew Waller for their work with the IMGT/HLA Sequence database and their help in the preparation of tables for this report. Also thanked are Dr. Peter Stoehr and the staff at the European Bioinformatics Institute for their continued support of the IMGT/HLA Database. The support of Biostest for support of the committee meeting is gratefully acknowledged.

## List of committee members involved in preparing this report

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 P. I. Terasaki, Los Angeles, USA

## Co-opted members

R. E. Bontrop, Biomedical Primate Research Centre, Rijswijk, The Netherlands.

†Members attending the committee meetings in May 2002.

## Footnote:

New sequences should be communicated to Dr Steven Marsh via the sequence submission tool of the IMGT/HLA Database to receive official names, [www.ebi.ac.uk/imgt/hla](http://www.ebi.ac.uk/imgt/hla).

## References

- Balas, A., Santos, S., Aviles, M.J., Garcia-Sánchez, F., Lillo, R., Alvarez, A., Villar-Guimerans, L.M. & Vicario, J.L. (2002) The elongation of the cytoplasmic domain due to a point deletion at exon 7 results in a HLA-C null allele (Cw\*0409N). *Tissue Antigens*, **59**, 95.
- Beck, S., Abdulla, S., Alderton, R.P., Glynnne, R.J., Gut, I.G., Hosking, L.K., Jackson, A., Kelly, A., Newell, W.R., Sanseau, P., Radley, E., Thorpe, K.L. & Trowsdale, J. (1996) Evolutionary dynamics of non-coding sequences within the class II region of the human MHC. *Journal of Molecular Biology*, **255**, 1.
- Bengtsson, M., Danielsson, F., Egle Jansson, I., Jidell, E. & Johansson, U. (2002a) Two new HLA-Cw\* alleles, Cw\*0105 and Cw\*1405, detected by sequence based typing. *Tissue Antigens*, **59**, 226.
- Bengtsson, M., Danielsson, F., Egle Jansson, I. & Johansson, U. (2002b) Identification of a new HLA-DPB1 allele, HLA-DPB1\*9001. *Tissue Antigens*, **59**, 344.
- Binder, T., Heym, J., Horn, B. & Blasczyk, R. (2000) HLA-A\*2416: a new allele of the HLA-A19 lineage. *Tissue Antigens*, **55**, 178.
- Bodmer, J.G., Marsh, S.G.E., Albert, E., Bodmer, W.F., Bontrop, R.E., Charron, D., Dupont, B., Erlich, H.A., Mach, B., Mayr, W.R., Parham, P., Sasasuki, T., Schreuder, G.M.T., Strominger, J.L., Svejgaard, A. & Terasaki, P.I. (1995) Nomenclature for factors of the HLA system, 1995. *Tissue Antigens*, **46**, 1.
- Bodmer, J.G., Marsh, S.G.E., Albert, E., Bodmer, W.F., Dupont, B., Erlich, H.A., Mach, B., Mayr, W.R., Parham, P., Sasasuki, T., Schreuder, G.M.T., Strominger, J.L., Svejgaard, A. & Terasaki, P.I. (1991) Nomenclature for factors of the HLA system, 1990. *Tissue Antigens*, **37**, 97.
- Bodmer, J.G., Marsh, S.G.E., Albert, E., Bodmer, W.F., Dupont, B., Erlich, H.A., Mach, B., Mayr, W.R., Parham, P., Sasasuki, T., Schreuder, G.M.T., Strominger, J.L., Svejgaard, A. & Terasaki, P.I. (1992) Nomenclature for factors of the HLA system,

1991. In: *HLA 1991* (ed. by T. Tsuji, M. Aizawa & T. Sasazuki), p. 17. Oxford University Press, Oxford.
- Bodmer, J.G., Marsh, S.G.E., Albert, E., Bodmer, W.F., Dupont, B., Erlich, H.A., Mach, B., Mayr, W.R., Parham, P., Sasazuki, T., Schreuder, G.M.T., Strominger, J.L., Svejgaard, A. & Terasaki, P.I. (1994) Nomenclature for factors of the HLA system, 1994. *Tissue Antigens*, **44**, 1.
- Bodmer, J.G., Marsh, S.G.E., Albert, E.D., Bodmer, W.F., Bontrop, R.E., Charron, D., Dupont, B., Erlich, H.A., Fauchet, R., Mach, B., Mayr, W.R., Parham, P., Sasazuki, T., Schreuder, G.M.T., Strominger, J.L., Svejgaard, A. & Terasaki, P.I. (1997) Nomenclature for factors of the HLA system, 1996. *Tissue Antigens*, **49**, 297.
- Bodmer, J.G., Marsh, S.G.E., Albert, E.D., Bodmer, W.F., Bontrop, R.E., Dupont, B., Erlich, H.A., Hansen, J.A., Mach, B., Mayr, W.R., Parham, P., Petersdorf, E.W., Sasazuki, T., Schreuder, G.M., Strominger, J.L., Svejgaard, A. & Terasaki, P.I. (1999) Nomenclature for factors of the HLA system, 1998. *Tissue Antigens*, **53**, 407.
- Bodmer, J.G., Marsh, S.G.E., Parham, P., Erlich, H.A., Albert, E., Bodmer, W.F., Dupont, B., Mach, B., Mayr, W.R., Sasazuki, T., Schreuder, G.M.T., Strominger, J.L., Svejgaard, A. & Terasaki, P.I. (1990) Nomenclature for factors of the HLA system, 1989. *Tissue Antigens*, **35**, 1.
- Bodmer, W.F., Albert, E., Bodmer, J.G., Dupont, B., Mach, B., Mayr, W.R., Sasazuki, T., Schreuder, G.M.T., Svejgaard, A. & Terasaki, P.I. (1989) Nomenclature for factors of the HLA system, 1987. In: *Immunobiology of HLA* (ed. by B. Dupont), p. 72. Springer-Verlag, New York.
- Canossi, A., Papola, F., Liberatore, G., Del Beato, T., Piancatelli, D., Tessitore, A., Vicentini, M.T., Maccarone, D., Aureli, A., Cervelli, C., Di Rocco, M., Casciani, C.U. & Adorno, D. (2002) Identification of the novel allele B\*4427 and a confirmatory sequence (B\*44022). *Tissue Antigens*, **59**, 331.
- Casamitjana, N., Gil, J., Campos, E., Santos, M., Nogues, N., Ribera, A. & Palou, E. (2001) Identification of a novel HLA-DQB1\*06 allele, DQB1\*0618. *Tissue Antigens*, **58**, 269.
- Chen, D.S., Tang, T.F., Pulyaeva, H., Slack, R., Tu, B., Wagage, D., Li, L., Perlee, L., Ng, J., Hartzman, R.J. & Hurley, C.K. (2002) Relative HLA-DRB1\*04 allele frequencies in five United States populations found in a hematopoietic stem cell volunteer donor registry and seven new DRB1\*04 alleles. *Tissue Antigens*, **60**, in press.
- Corell, A., Cox, S.T., Soteriou, B., Ramon, D., Madrigal, J.A. & Marsh, S.G.E. (2002) Complete cDNA sequences of the HLA-DRB1\*14011, \*1402, \*1403 and \*1404 alleles. *Tissue Antigens*, **59**, 66.
- Cox, S.T., Ogilvie, H., Bohan, E.M., Holman, R., Prentice, G., Potter, M., Madrigal, J.A. & Little, A.-M. (2002a) Sequence of two new HLA-C alleles: HLA-Cw\*0313 and HLA-Cw\*1208. *Tissue Antigens*, **59**, 49.
- Cox, S.T., Prokupek, B., Baker, F., Holman, R., Leung, V.T.C., Wong, A.S.W., Madrigal, J.A. & Little, A.-M. (2002b) Identification of HLA-B\*1566. *Tissue Antigens*, **59**, 424.
- Curcio, M., Lapi, S., Italia, S. & Rizzo, G. (2002) Identification of a novel HLA-DPB1 allele, DPB1\*02014, by sequence-based typing. *Tissue Antigens*, **59**, 58.
- Czachurski, D., Rausch, M., Scherer, S., Opelz, G. & Mytilineos, J. (2002) Characterisation of a new HLA-A allele (A\*0256) identified in Caucasian individual. *Tissue Antigens*, **59**, in press.
- De Pablo, R., Solis, R., Balas, A. & Vilches, C. (2002) Specific amplification of the HLA-DRB4 gene from cDNA. Complete coding sequence of the HLA alleles DRB4\*0103101 and DRB4\*01033. *Tissue Antigens*, **59**, 44.
- den Hollander, N., Li, J., van Oosterwijk, A., Ng, C.-M. & Singal, D.P. (2002) Identification of a new HLA-B null, B\*1817N, allele in a family. *Tissue Antigens*, **59**, 341.
- Dunn, T.A., Igglehart, B.A. & Leffell, M.S. (2001) Identification of a novel DR4 allele, DRB1\*0442. *Tissue Antigens*, **58**, 198.
- Dunne, C., Little, A.-M., Cox, S.T., Masson, D., Crowley, J., Barnes, T., Marsh, S.G.E., Rooney, G., Hagan, R., Lawlor, E. & Madrigal, J.A. (2002) Identification and nucleotide sequence of a new null allele, HLA B\*3540N. *Tissue Antigens*, **59**, 522.
- Elsner, H.-A., Bernard, G., Bernard, A., Eiz-Vesper, B. & Blasczyk, R. (2002) Non-expression of HLA-A\*2901102N is caused by a nucleotide exchange in the mRNA splicing site at the beginning of intron 4. *Tissue Antigens*, **59**, 139.
- Estefanía, E., Gómez-Lozano, N., de Pablo, R., Moreno, M.E. & Vilches, C. (2002) Complementary DNA sequence of the novel HLA-B\*3704 allele. *Tissue Antigens*, **59**, 142.
- Fu, Y., Chen, W., Liu, Z., Lin, J., Jia, Z., Pan, D. & Xu, A. (2002) A novel HLA-DQB1 allele isolated from Jing ethnic group in Southwest China. *Tissue Antigens*, **60**, 102.
- Gagne, K., Bonneville, F., Cheneau, M.-L., Herry, P., Pinson, M.-J., Herfray, P., Cesbron-Gautier, A., Folléa, G. & Bignon, J.-D. (2002) Identification of a new HLA-DRB1 allele, DRB1\*0321. *Tissue Antigens*, **60**, in press.
- Gans, C.P., Tang, T.F., Slack, R., Ng, J., Hartzman, R.J. & Hurley, C.K. (2002) DRB1\*14 diversity and DRB3 associations in four major population groups in the United States. *Tissue Antigens*, **59**, 364.
- Garino, E., Belvedere, M., Berrino, M., Bertola, L.M.D.O.A., Mazzola, G., Rossetto, C., Carcassi, C., Lai, S., Gay, E., Ricotti, M. & Curtoni, E.S. (2002) A new HLA-A\*11 allele, A\*1112, identified by Sequence-Based-Typing. *Tissue Antigens*, **60**, 84.
- Geraghty, D.E., Koller, B.H., Hansen, J.A. & Orr, H.T. (1992) The HLA class I gene family includes at least six genes and twelve pseudogenes and gene fragments. *Journal of Immunology*, **149**, 1934.
- Grams, S.E., Moonsamy, P.V., Mano, C., Oksenberg, J.R. & Begovich, A.B. (2002) Two new HLA-B alleles, B\*4422 and B\*4704, identified in a study of families with autoimmunity. *Tissue Antigens*, **59**, 338.
- Grams, S.E., Wu, J., Noreen, H.J., Mangaccat, J., Cognato, M.A., Johnson, S., Segall, M., Williams, T.M. & Begovich, A.B. (2001) Three new DP alleles identified in a study of 800 unrelated bone marrow donor-recipient pairs. *Tissue Antigens*, **58**, 272.
- Greville, W.D., Chapman, G., Hogbin, J.-P. & Dunckley, H. (2002a) Novel HLA-DRB1 alleles revealed by sequencing based typing: DRB1\*04053 and DRB1\*1143. *Tissue Antigens*, **59**, 347.
- Greville, W.D., Chapman, G., Hogbin, J.-P., Kennedy, A. & Dunckley, H. (2002b) Novel HLA-DRB1 alleles discovered during routine sequencing based typing: DRB1\*03052, DRB1\*04032, DRB1\*1139 and DRB1\*1346. *Tissue Antigens*, **59**, 154.
- Greville, W.D. & Dunckley, H. (2002) Identification of sequence errors in HLA-DRB1\*0801 and HLA-DRB1\*12011. *Tissue Antigens*, **59**, 52.
- Hurley, C.K., Schreuder, G.M.T., Marsh, S.G.E., Lau, M., Middleton, D. & Noreen, H. (1997) The search for HLA-matched donors: a summary of HLA-A\*, -B\*, -DRB1/3/4/5\* alleles and their association with serologically defined HLA-A, -B, -DR antigens. *Tissue Antigens*, **50**, 401.
- Kennedy, C.T., Greville, W.D., Dodd, R., Le, T., Taverniti, A., Chapman, G., Wallace, R., Kennedy, A., Strickland, J. & Dunckley, H. (2002) Six new HLA Class I alleles detected by PCR-SSO genotyping. *Tissue Antigens*, **59**, 320.
- Kralovicova, J., Marsh, S.G.E., Waller, M.J., Hammarstrom, L. & Vorechovsky, I. (2002) The HLA-DRA\*0102 allele: correct nucleotide sequence and associated HLA haplotypes. *Tissue Antigens*, **60**, in press.
- Li, J., den Hollander, N., van Oosterwijk, A., Ng, C.-M. & Singal, D.P. (2002) Identification of a new HLA-A null (A\*2436N) allele. *Tissue Antigens*, **60**, in press.

- Lin, J., Liu, Z., Chen, W., Jia, Z., Pan, D., Fu, Y., Zhang, F. & Xu, A. (2002) A novel DRB1\*09 allelic sequence in Jing ethnic minority of China. *European Journal of Immunogenetics*, **29**, 335.
- Luo, M., Embree, J., Ramdahin, S., Ndinya-Achola, J., Njehga, S., Bwayo, J.B., Pan, S., Mao, X., Stuart, T., Brunham, R.C. & Plummer, F. (2002) HLA-A and HLA-B in Kenya, Africa: allele frequencies and identification of HLA-B\*1567 and B\*4426. *Tissue Antigens*, **59**, 370.
- Luscher, M.A., MacDonald, K.S., Bwayo, J.J., Plummer, F.A. & Barber, B.H. (2001) Sequence and peptide-binding motif for a variant of HLA-A\*0214 (A\*02142) in an HIV-1-resistant individual from the Nairobi Sex Worker cohort. *Immunogenetics*, **53**, 10.
- Marsh, S.G.E., Bodmer, J.G., Albert, E.D., Bodmer, W.F., Bontrop, R.E., Dupont, B., Erlich, H.A., Hansen, J.A., Mach, B., Mayr, W.R., Parham, P., Petersdorf, E.W., Sasazuki, T., Schreuder, G.M., Strominger, J.L., Svejgaard, A. & Terasaki, P.I. (2001) Nomenclature for factors of the HLA system, 2000. *Tissue Antigens*, **57**, 236.
- Martinez-Gallo, M., Martinez-Lostao, L., Martinez-Carretero, M.A., Gago, I., Maroto, P., Rodriguez-Sanchez, J.L. & de la Calle-Martin, O. (2002) Identification of a novel HLA-DRB1 allele (DRB1\*0108) by sequence-based DRB typing in two siblings. *Tissue Antigens*, **59**, 350.
- Obuchi, N., Takahashi, M., Nouchi, T., Satoh, M., Arimura, T., Ueda, K., Akai, J., Ota, M., Naruse, T., Inoko, H., Numano, F. & Kimura, A. (2001) Identification of MICA alleles with a long Leu-repeat in the transmembrane region and no cytoplasmic tail due to a frameshift-deletion in exon 4. *Tissue Antigens*, **57**, 520.
- Pérez-Rodríguez, M., Raimondi, E., Marsh, S.G.E. & Madrigal, J.A. (2002) Identification of a new MICA allele, MICA\*047. *Tissue Antigens*, **59**, 216.
- Poli, F., Bianchi, P., Scalamogna, M., Crespiatico, L., Ghidoli, N., Puglisi, G. & Sirchia, G. (1999) A nucleotide deletion in exon 4 is responsible for an HLA-A null allele (A\*0105N). *Tissue Antigens*, **54**, 300.
- Przemeck, M., Elsner, H.-A., Sel, S., Pastucha, L.T. & Blasczyk, R. (2002) HLA-B\*4431, a new HLA-B variant with a complex ancestral history involving HLA-B\*44, B\*40 and B\*07 alleles. *Tissue Antigens*, **60**, 91.
- Robinson, J., Malik, A., Parham, P., Bodmer, J.G. & Marsh, S.G.E. (2000) IMGT/HLA database—a sequence database for the human major histocompatibility complex. *Tissue Antigens*, **55**, 280.
- Robinson, J., Waller, M.J., Parham, P., Bodmer, J.G. & Marsh, S.G.E. (2001) IMGT/HLA Database—a sequence database for the human major histocompatibility complex. *Nucleic Acids Research*, **29**, 210.
- Schreuder, G.M.T., Hurley, C.K., Marsh, S.G.E., Lau, M., Maiers, M., Kollman, C. & Noreen, H. (1999) The HLA dictionary 1999: a summary of HLA-A, -B, -C, -DRB1/3/4/5, -DQB1 alleles and their association with serologically defined HLA-A, -B, -C, -DR and -DQ antigens. *Tissue Antigens*, **54**, 409.
- Sheldon, M.H., Bunce, M., Dunn, P.P.J., Day, S., Lee, G.D., Park, Y.-J., Bang, B.K., Kim, B.K. & Oh, E.-J. (2002) Identification of two new alleles in a single Korean individual: HLA-B\*1568 and DRB1\*1208. *Tissue Antigens*, **59**, 430.
- Smillie, D.M., Smith, P.A., Day, S. & Dunn, P.P.J. (2002) Identification of a new HLA-B\*15 allele: HLA-B\*1569. *Tissue Antigens*, **59**, 151.
- Steiner, N.K., Gans, C.P., Kosman, C., Baldassarre, L.A., Edson, S., Jones, P.F., Rizzuto, G., Pimtanothai, N., Koester, R., Mitton, W., Ng, J., Hartzman, R.J. & Hurley, C.K. (2001a) Novel HLA-B alleles associated with antigens in the 8C CREG. *Tissue Antigens*, **57**, 373.
- Steiner, N.K., Kosman, C., Jones, P.F., Gans, C.P., Rodriguez-Marino, S.G., Rizzuto, G., Baldassarre, L.A., Edson, S., Koester, R., Sese, D., Mitton, W., Ng, J., Hartzman, R.J. & Hurley, C.K. (2001b) Twenty-nine new HLA-B alleles associated with antigens in the 5C CREG. *Tissue Antigens*, **57**, 481.
- Stephens, R., Horton, R., Humphray, S., Rowen, L., Trowsdale, J. & Beck, S. (1999) Gene organisation, sequence variation and iso-chore structure at the centromeric boundary of the human MHC. *Journal of Molecular Biology*, **291**, 789.
- Tang, T.F., Lin, Y.S., Robbins, F.M., Li, L., Sintasath, D., Coquillard, G., Huang, A., Heine, U., Ng, J., Hartzman, R.J. & Hurley, C.K. (2002) Description of fourteen new DRB alleles found in a stem cell donor registry. *Tissue Antigens*, **59**, 63.
- Vernet, C., Ribouchon, M.T., Chimini, G., Jouanolle, A.M., Sidibe, I. & Pontarotti, P. (1993) A novel coding sequence belonging to a new multicopy gene family mapping within the human MHC class I region. *Immunogenetics*, **38**, 47.
- Vidal, S., Morante, M.P., Mosquera, A.M., Moga, E., Querol, S., Garcia, J. & Rodriguez-Sanchez, J.L. (2001) Identification and sequencing of the HLA-B\*4106 allele. *Tissue Antigens*, **58**, 343.
- Voorter, C.E.M. & van den Berg-Loonen, E.M. (2002) Identification of 2 new HLA-A alleles, A\*2419 and A\*3011, by sequence-based typing. *Tissue Antigens*, **59**, 136.
- Wain, H.M., Bruford, E.A., Lovering, R.C., Lush, M.J., Wright, M.W. & Povey, S. (2002) Guidelines for human gene nomenclature. *Genomics*, **79**, 464.
- WHO Nomenclature Committee (1968) *Bulletin of the WHO*, **39**, 483.
- WHO Nomenclature Committee (1970) WHO terminology report. In: *Histocompatibility Testing, 1970* (ed. by P. I. Terasaki), p. 49. Munksgaard, Copenhagen.
- WHO Nomenclature Committee (1972) *Bulletin of the WHO*, **47**, 659.
- WHO Nomenclature Committee (1975) *Bulletin of the WHO*, **52**, 261.
- WHO Nomenclature Committee (1978) *Bulletin of the WHO*, **56**, 461.
- WHO Nomenclature Committee (1980) In: *Histocompatibility Testing, 1980* (ed. by P. I. Terasaki), p. 18. UCLA Tissue Typing Laboratory, Los Angeles.
- WHO Nomenclature Committee (1985) Nomenclature for factors of the HLA system 1984. In: *Histocompatibility Testing, 1984* (ed. by E. D. Albert, M. P. Baur & W. R. Mayr), p. 4. Springer-Verlag, Berlin.
- Witter, K., Lau, M., Zahn, R., Scholz, S. & Albert, E.D. (2001) Identification of a novel HLA-B\*2722 allele from a Filipino cell. *Tissue Antigens*, **58**, 263.
- Wu, G.-G., Cheng, L.-H., Deng, Z.-H., Wang, L.-X., Wei, T.-L., Yang, C.-S. & Zhao, T.-M. (2002a) Cloning and complete sequence of a novel HLA-A null allele, A\*0253N, with a termination codon generated by a C to G mutation in exon 2. *Tissue Antigens*, **59**, 328.
- Wu, S., Lai, C.-Y., Chou, F.-C., Lai, S.-M., Chen, S.-P. & Shiao, Y.-M. (2002b) Point mutation in the  $\beta$  sheet of the HLA-C  $\alpha_2$  domain generates a novel HLA-C allele (HLA-Cw\*08012) in a Puyuma aboriginal individual in Taiwan. *Tissue Antigens*, **60**, in press.
- Wu, S., Lai, C.-Y., Lai, S.-M., Chen, S.-P., Chou, F.-C., Shiao, Y.-M. & Huang, C.-S. (2002c) Point mutation in the  $\alpha$  helix of the HLA-C  $\alpha_2$  domain generates a novel HLA-C allele (HLA-Cw\*0106) in a Han Chinese individual in Taiwan. *Tissue Antigens*, **59**, 433.
- Zanone, R., Bettens, F. & Tiercy, J.-M. (2002) Sequence of a new DR12 allele with two silent mutations that affect PCR-SSP typing. *Tissue Antigens*, **59**, 165.
- Zhang, Y., Lázaro, A.M., Mirbaha, F., Lavingia, B., Vorhaben, R. & Stastny, P. (2002) Characterization of a novel MICA allele: MICA\*047. *Tissue Antigens*, **59**, 308.

**Table 2.** Designations of HLA-A alleles

| HLA alleles <sup>a</sup> | HLA specificity | Previous equivalents | Individual or cell line from which the sequence was derived | Accession number  | References or submitting author(s)          |
|--------------------------|-----------------|----------------------|---|---|---|
| A*010101                 | A1              | —                    | LCL721, MOLT4, PP   | X55710, M24043, Z93949, AJ278305                          |   |
| A*010102                 | —               | —                    | GN00348   | AF248059, AF248060  |   |
| A*0102                   | A1              | —                    | DAUDI   | U07161  |   |
| A*0103                   | A1 <sup>c</sup> | —                    | 04VC, UCLA 144, BONIFACE, FU-GP, JF-GP, BR-GP               | Y12469, Y12470, AJ002528, AJ002529, AF098160              |   |
| A*0104N                  | Null            | A*01N, A*01N-Ca      | PELa, PEFr, PEPi, PEPa, CAFL, CB1280                        | Z93776, Z97027, AJ011125, AJ011126, AJ011127              | (Poli <i>et al.</i> , 1999) <sup>b</sup>    |
| A*0106                   | —               | A*0101 V             | GN00280   | AF143231, AF143232  |   |
| A*0107                   | A1              | BLP-N                | BLP-N   | AF219632, AF219633  |   |
| A*0108                   | A1              | A*01                 | 34040   | AJ277792  |   |
| <b>A*0109</b>            | —               | —                    | T110  | AJ315641  | A-M Little                                  |
| A*020101                 | A2              | A2.1                 | LCL721, JY, GM637, GRC138, T5-1, JD                         | K02883, M84379, X02457                                    |   |
| A*020102                 | A2              | —                    | CHI564, CHI557  | Y14624, Y14625  |   |
| A*020103                 | A2              | A*02DKP              | DKP, 19673946   | AF108449, AF108450, AF255333, AF190713, F190714, AF190715 |   |
| A*020104                 | A2              | A*02New              | NM4a189   | AF139832, AF139833  |   |
| A*020105                 | A2              | A*02AR               | 32711   | AJ277793  |   |
| A*020106                 | —               | A0201V3              | JCB11458  | AB032595, AB048347  |   |
| A*0202                   | A2              | A2.2F                | M7, 951314  | M17566, M17568, X94566                                    |   |
| A*0203                   | A203            | A2.3                 | DK1, 951315   | U03863, M17567, M19670, X94567                            |   |
| A*0204                   | A2              | —                    | RML, AN, 951316   | X57954, M86404, X94568 AJ297476                           |   |
| A*0205                   | A2              | A2.2Y                | WT49, AM, SUS-NF, 951317                                    | U03862, L76290, X94569                                    |   |
| A*0206                   | A2              | A2.4a                | CLA, T7526, 951318  | M24042, X94570  |   |
| A*0207                   | A2              | A2.4b                | KNE, KTO  | D50458  |   |
| A*0208                   | A2              | A2.4c                | KLO   | X94571  |   |
| A*0209                   | A2              | A2-OZB               | OZB   | AJ249241  |   |
| A*0210                   | A210            | A2-LEE               | XLI-ND, 951322  | Z23071, X94572  |   |
| A*0211                   | A2              | A2.5                 | KIME, GRC138, 951366  | X60764, M84377, X94573                                    |   |
| A*0212                   | A2              | —                    | KRC033, KRC005  | M84378  |   |
| A*0213                   | A2              | A2SLU                | SLUGEO  | Z27120  |   |
| A*0214                   | A2              | A2'1S'               | 1S, ML1260  | Z30341, AF305699  | (Luscher <i>et al.</i> , 2001) <sup>b</sup> |
| A*0215N                  | Null            | HLA-Anull            | TSU   | D38525  |   |
| A*0216                   | A2              | A2'TUB'              | TUBO  | Z46633  |   |
| A*021701                 | A2              | A*New                | AMALA, LZL, C.S.  | U18930, L43526, L43527, X89707, X89708                    |   |
| A*021702                 | A2              | —                    | H.K.  | Y13267  |   |
| A*0218                   | A2              | A*2K                 | ENDO  | D83515  |   |
| A*0219                   | —               | A-02x09              | TOB-81  | L76936  |   |
| A*022001                 | A2              | —                    | BI  | X96724  |   |
| A*022002                 | A2              | A*02New              | MT-SN   | AJ276069  |   |
| A*0221                   | A2              | A206W331R            | W331R   | U56825  |   |
| A*0222                   | A2              | A-02x28              | TER-109, OCA1/4   | U76398, U76399, Y11441                                    |   |
| A*0224                   | A2              | A*02JG               | 11952547, 13041452, RP122                                   | Y11201, Y11202, AF036921, F001956, AF001957               |   |
| A*0225                   | A2              | —                    | NP814, 970551   | U70863, Y13028  |   |

**Table 2.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity | Previous equivalents | Individual or cell line from which the sequence was derived | Accession number   | References or submitting author(s)  |
|--------------------------|-----------------|----------------------|---|--|-------------------------------------|
| A*0226                   | —               | —                    | C.C.  | AF008933, U90138, U90139                                   |                                     |
| A*0227                   | —               | A*02TK               | TRK   | AJ001269   |                                     |
| A*0228                   | —               | —                    | NM3298  | AF041365, AF041366   |                                     |
| A*0229                   | A2              | —                    | RAG   | AF053479, AF053480, AF012766                               |                                     |
| A*0230                   | —               | A*02WP               | NM332, CL154, WP  | AF101162, AF101163, AF116215, AF133091, AF133092           |                                     |
| A*0231                   | A2              | A*02011V             | 19703222  | AF113923, AF113924   |                                     |
| A*0232N                  | Null            | A*02xxN              | NDS-AN  | AF117228   |                                     |
| A*0233                   | —               | A*0201New            | CL-PPA  | AF140506   |                                     |
| A*0234                   | A2              | A*AAAT               | AAT   | AF129429, AF129430, AF129431                               |                                     |
| A*0235                   | —               | A*0201V              | GN00279, GN00300  | AF140600, AF140601, AF157310, AF157311                     |                                     |
| A*0236                   | —               | A*02011V             | GN00297   | AF157308, AF157309   |                                     |
| A*0237                   | —               | A*0212Variant        | GN00303   | AF157563, AF157564   |                                     |
| A*0238                   | —               | A*0213V              | GN00260, GN00286, GN00346                                   | AF135542, AF135543, AF181101, AF181102, AF232705, AF232706 |                                     |
| A*0239                   | —               | A*02011V             | GN00308, 99-2203  | AF173873, AF173874, AF198352, AF198353                     |                                     |
| A*0240                   | —               | A*CB2406             | CB2406, CB2406(MUM)   | AF194531, AF194532   |                                     |
| A*0241                   | A2              | A*02CIS              | KMP01-636   | AF170580, AF170581   |                                     |
| A*0242                   | A2              | A0201V2              | JCB6898   | AB032594   |                                     |
| A*0243N                  | Null            | A*02ROUB             | ROUB  | AJ251960   |                                     |
| A*0244                   | —               | —                    | GN00337   | AF226834, AF226835   |                                     |
| A*0245                   | —               | —                    | 1998-302-2581   | AF251354, AF251355   |                                     |
| A*0246                   | A2              | A*02COL              | COL   | AJ289156   |                                     |
| A*0247                   | —               | —                    | GN00378   | AF291839, AF291840   |                                     |
| A*0248                   | —               | —                    | GN00381   | AF299250, AF299251   |                                     |
| A*0249                   | —               | A*02new              | 22697   | AJ291697, AJ291698   |                                     |
| <b>A*0250</b>            | A2              | A*02x68              | A02x68  | AF162678, AF162679   | P Stastny                           |
| <b>A*0251</b>            | —               | —                    | 2000-7-206, Taramahara31                                    | AF372047, AF372048, AJ457988                               | CK Hurley, A-M Little               |
| <b>A*0252</b>            | —               | —                    | JSILV   | AF417237, AF417238   | H Dunckley                          |
| <b>A*0253N</b>           | Null            | —                    | Yanli, VTIS25793  | AF416455, AF479485, AF479486                               | (Wu <i>et al.</i> , 2002a), BD Tait |
| <b>A*0254</b>            | —               | —                    | 2000-084-3329   | AF440104, AF440105   | CK Hurley                           |
| <b>A*0255</b>            | —               | —                    | 1PFA8   | AY045739, AY045740   | WH Hildebrand                       |
| <b>A*0256</b>            | —               | —                    | MYTCZA-A202x  | AJ430523, AJ430524, AJ431714, AJ431715                     | (Czachurski <i>et al.</i> , 2002)   |
| <b>A*0257</b>            | —               | —                    | Taramahara35  | AJ457989   | A-M Little                          |
| <b>A*0258</b>            | —               | —                    | RL*D  | AY100700, AY100701   | L-A Baxter-Lowe                     |
| A*030101                 | A3              | A3.1                 | JG, JD, PP, AP630   | X00492, U32184   |                                     |
| A*030102                 | A3              | DT18-A*0301v         | DT18  | AF053128, AF053129   |                                     |
| A*030103                 | A3              | A*03NJ               | 12244015, NM4a227   | Y17000, Y17001, AF146365, AF146366                         |                                     |
| A*0302                   | A3              | A3.2                 | E1B2, R69772, CL183   | U56434, U56435, AF217561                                   |                                     |
| A*0303N                  | Null            | A3blank              | MMK   | L77702   |                                     |
| A*0304                   | A3              | —                    | CTM-2983694   | AF015930   |                                     |

**Table 2.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity | Previous equivalents      | Individual or cell line from which the sequence was derived | Accession number   | References or submitting author(s) |
|--------------------------|-----------------|---------------------------|---|--|------------------------------------|
| A*0305                   | A3              | A*03011V                  | GN00262, GN00309, 99-2197, CS, 34507                        | AF135546, AF135547, AF173877, AF173878, AF190718, AF190719, AJ252283, AJ252284, AJ252285, AJ401085, AJ401086, AJ401087 |                                    |
| A*0306                   | —               | A*03011V                  | GN00341   | AF226842, AF226843   |                                    |
| A*0307                   | —               | A*03011New                | NM5A488   | AF268399, AF268400   |                                    |
| A*0308                   | —               | A*03011v                  | GN00375   | AF288047, AF288048   |                                    |
| <b>A*0309</b>            | —               | —                         | BY00016   | AF372049, AF372050   | CK Hurley                          |
| A*110101                 | A11             | A11E, A11.1, A11          | CJO-A, K.LIE, MMU, YMU, THA-DCH412, THA-DCH926, THA-DCH1093 | M16007, M16008, X13111, D16841, AF030899, AF030900, AF030901, AF030902, AF030897, AF030898                             |                                    |
| A*110102                 | A11             | A*1101new                 | UCLA201   | AJ238608, AJ238609, AJ238610   |                                    |
| A*1102                   | A11             | A11K, A11.2               | K.LIE, KOK, CTA, THA-DCH538, THA-DCH639                     | X13112, D16842, AF030903, AF030904, AF030905, AF030906   |                                    |
| A*1103                   | A11             | —                         | AMAD  | X91399   |                                    |
| A*1104                   | A11             | 87A                       | HM, I65, 87A, THA-DCH7672, THA-DCH7673                      | U50574, U59701, U59702, U88250, AF017309, AF030907, AF030908, AF030909, AF030910                                       |                                    |
| A*1105                   | A11             | —                         | KH, GN00302, HOATWAY  | Y15223, AF147454, AF147455, AJ306733   | P Dunn <sup>b</sup>                |
| A*1106                   | —               | A*1101V                   | GN00259   | AF135540, AF135541   |                                    |
| A*1107                   | A11             | A*11                      | CMC1  | AF165065   |                                    |
| A*1108                   | —               | A11nou                    | VPH-IM0002135   | AF284443   |                                    |
| A*1109                   | —               | —                         | 9315466   | AF260828, AF260829   |                                    |
| <b>A*1110</b>            | A11             | A11v                      | VTIS38035   | AF329874, AF329875   | BD Tait                            |
| <b>A*1111</b>            | —               | —                         | 2001-26-469   | AF440108, AF440109   |                                    |
| <b>A*1112</b>            | A11             | —                         | 103201, 103195, 106843, 106844                              | AF439511   | (Garino et al., 2002)              |
| <b>A*1113</b>            | A11             | A11v                      | B5997   | AB073216, AB073217   |                                    |
| A*2301                   | A23(9)          | —                         | SHJO, ELON  | M64742, L76288   |                                    |
| A*2302                   | —               | A*2301V                   | GN00274   | AF137079, AF137080   |                                    |
| A*2303                   | —               | A*2301variant             | GN00250   | AF102571, AF102572   |                                    |
| A*2304                   | —               | A*2301V                   | GN00263   | AF135548, AF135549   |                                    |
| A*2305                   | —               | A*2301New                 | GN00284, NM5A405  | AF140859, AF140860, AF255718, AF255719   |                                    |
| A*2306                   | —               | A*2301New                 | GM14672   | AJ271340   |                                    |
| <b>A*2307N</b>           | Null            | A*23MATSi                 | MATSi   | AJ306634   | A Dormoy                           |
| <b>A*2308N</b>           | Null            | —                         | SH38  | AY028848, AY028849, AY028850   |                                    |
| <b>A*2309</b>            | —               | —                         | MAWE0816AN  | AJ426561   | A Smith<br>A-M Little              |
| A*24020101               | A24(9)          | A24, A2402                | SHJO, 32/37, KRC032, KRC110, THA-DCH538                     | M64740, L47206, Z72423, AF030911, AF030912   |                                    |
| A*24020102L              | Low A24         | A2402LOW, APET, A24L-LACC | 6319, PAn, PMa, Pmi, LACC                                   | L76291, Z72422, Z97370   |                                    |
| A*240202                 | A24(9)          | —                         | NM426   | AF101160, AF101161   |                                    |
| <b>A*240203</b>          | A24(9)          | —                         | KBM-2   | AY121128   | KW Lee                             |
| A*240301                 | A2403           | A9.3                      | APA, KPE, THA-DCH412, THA-DCH8151, THA-DCH8152              | M64741, AF030913, AF030914, AF030915, AF030916, AF030917, AF030918   |                                    |
| A*240302                 | A2403           | A*2403Variant             | GN00247   | AF102565, AF102566   |                                    |

**Table 2.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity    | Previous equivalents | Individual or cell line from which the sequence was derived          | Accession number   | References or submitting author(s) |
|--------------------------|--------------------|----------------------|--|--|------------------------------------|
| A*2404                   | A24(9)             | A24AK                | ITOU, KJRAID5  | D26550, L43532, L43533   |                                    |
| A*2405                   | A24(9)             | —                    | DST, FST   | X82161, X82189   |                                    |
| A*2406                   | A24(9)             | A*24YM               | YM29   | U18987, U19733   |                                    |
| A*2407                   | A24(9)             | A#46                 | PICH, A#46, K92068, THA-DCH507, THA-DCH522, THA-DCH1109, THA-DCH5342 | U25971, U36914, L43530, L43531, AF030921, AF030922, AF030919, AF030920, AF030923, AF030924, AF030925, AF030926 |                                    |
| A*2408                   | A24(9)             | A*9HH                | K62098, HIRH   | L43528, L43529, D83516   |                                    |
| A*2409N                  | Null               | A24Null              | SUS-NF, WAG  | L47231, AJ251621   |                                    |
| A*2410                   | A2403 <sup>c</sup> | A*24JV               | JV1458, KM315, CH121, THA-DCH611, THA-DCH639, THA-DCH1109            | U37110, U37111, U59699, U59700, Y10695, AF030927, AF030928, AF030929, AF030930, AF030931, AF030932             |                                    |
| A*2411N                  | Null               | A*24LM               | LUME   | L76289   |                                    |
| A*2413                   | A24(9)             | A*24YM2              | YM81   | U37112, U37113   |                                    |
| A*2414                   | A24(9)             | A*24SA               | SBD6380  | U37114, U37115   |                                    |
| A*2415                   | —                  | —                    | NM3469   | AF042666, AF042667   |                                    |
| A*2417                   | —                  | A*2402v, A*VB        | NDS-NH, VB-ARCBS, 0234   | AF067436, AF067437, AF117764, AF117765, AJ239035, AJ239036   |                                    |
| A*2418                   | —                  | A*2403v              | 3362   | AF065401, AF065402   |                                    |
| A*2419                   | —                  | —                    | HP-CV  | Y17292, Y17291   |                                    |
| A*2420                   | —                  | —                    | SW36, 21833843, JCBB26794  | Y16948, Y16949, AF190716, AF190717, AB032596   |                                    |
| A*2421                   | —                  | A*24Var              | DHL, JSL   | AF106688, AF106689   |                                    |
| A*2422                   | A9                 | A*2403New, A9v       | CL153, GN00272   | AF116214, AF137081, AF137082   |                                    |
| A*2423                   | A24(9)             | A*24021New, A24v(9)  | EA31, 26586  | AF128537, AF128538, AJ278667   |                                    |
| A*2424                   | —                  | —                    | GN00275  | AF140723, AF140724   |                                    |
| A*2425                   | —                  | —                    | 10296952, NM5A251  | AF190708, AF190709, AF255716, AF255717   |                                    |
| A*2426                   | —                  | —                    | 12318945   | AF190710, AF190711, AF190712   |                                    |
| A*2427                   | —                  | A*24Mall, ?A24(9)    | MALL   | AJ271626   |                                    |
| A*2428                   | —                  | —                    | GN00359  | AF266519, AF266520   |                                    |
| A*2429                   | —                  | A*2402V              | GN00379  | AF291843, AF291844   |                                    |
| A*2430                   | —                  | A*2402V              | GN00380  | AF291841, AF291842   |                                    |
| A*2431                   | —                  | —                    | 2000-35-513  | AF298583, AF298584   |                                    |
| <b>A*2432</b>            | —                  | —                    | GN00390, 07-S-0025#0100  | AF359393, AF359394, AY038075   | CK Hurley, S Grams                 |
| <b>A*2433</b>            | A2403              | —                    | 17933/00, 17670/00   | AF363678, AF363679, AF363680   | A Smith                            |
| <b>A*2434</b>            | —                  | —                    | 2000-182-2100  | AF443283, AF443284   | CK Hurley                          |
| <b>A*2435</b>            | —                  | —                    | PR45   | AY045731, AY045732   | WH Hildebrand                      |
| <b>A*2436N</b>           | Null               | —                    | 022659718  | AF486832   | (Li <i>et al.</i> , 2002)          |
| A*2501                   | A25(10)            | —                    | BM92   | M32321   |                                    |
| A*2502                   | A10                | A66var               | M54672, TW   | X97802, AJ238524   |                                    |
| A*2503                   | —                  | A*2501V              | GN00273, GN00301   | AF137075, AF137076, AF148897, AF148898   |                                    |
| <b>A*2504</b>            | —                  | —                    | BY0019   | AY042682, AY042683   | CK Hurley                          |
| A*2601                   | A26(10)            | A26.1, A26.3         | GM637, O2BN5, MGAR, N.M., MIY-2, MIY-3                               | M24095, U03697, D16843, D32130, D32131   |                                    |
| A*2602                   | A26(10)            | A26.2, A26.1         | KT14, Y.I., E.K.   | M98453, D14350   |                                    |

**Table 2.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity      | Previous equivalents | Individual or cell line from which the sequence was derived | Accession number   | References or submitting author(s)     |
|--------------------------|----------------------|----------------------|---|--|--|
| A*2603                   | A26(10)              | A26.4                | T.M., S.M., MIY-1   | D14351, D32129   |  |
| A*2604                   | A26(10)              | A10SA                | Y.S.  | D14354   |  |
| A*2605                   | A26(10)              | A26KY                | SAJ022, K91089, K93022                                      | D50068, L43536, L43537   |  |
| A*2606                   | A26(10)              | —                    | KHB102  | L43534, L43535   |  |
| A*2607                   | A26(10)              | A26mic               | MIC-ND  | L48341   |  |
| A*2608                   | A26(10)              | A26RMH, A*26new-66A  | MI108, W652D, M.McL, 66A                                    | U45480, U52429, X99733, U43334, AF017310                                       |  |
| A*2609                   | A26(10) <sup>c</sup> | —                    | GN00158   | U90242, U90243   |  |
| A*2610                   | A10                  | —                    | 034-SEA-HK  | AF001553, AF001554   |  |
| A*2611N                  | Null                 | A26Null              | JBO13900  | AB005048   |  |
| A*2612                   | —                    | A*2601V              | NM1183, CS3, GN00249  | AF042186, AF042187, AF065486, AF065487   |  |
| A*2613                   | —                    | A*2601V              | GN00271   | AF139766, AF139767   |  |
| A*2614                   | —                    | A*MJUL               | MJUL  | AF194529, AF194530   |  |
| A*2615                   | —                    | A*26FONT             | FONT, FRED, FRED(-1), 22663, 6A29                           | AJ271225, AJ291695, AJ291696, AY045729, AY045730                               | WH Hildebrand <sup>b</sup>             |
| A*2616                   | —                    | —                    | 2000-7-951  | AF303952, AF303953   |  |
| A*2617                   | —                    | —                    | GN0384  | AF310142, AF310143   |  |
| <b>A*2618</b>            | —                    | —                    | GN00399   | AY050205, AY050206   | CK Hurley                              |
| A*29010101               | A29(19)              | A2901W652R           | JOE, W652R, AKB96676  | M23739, U83415, AJ303359   | R Blasczyk <sup>b</sup>                |
| <b>A*29010102N</b>       | Null                 | A*GBnu29             | GBnu29  | AJ293507   | (Elsner et al., 2002)                  |
| A*2902                   | A29(19)              | A29.2                | LAM   | X60108   |  |
| A*2903                   | —                    | —                    | CMD004AN  | Y09218, AJ000661   |  |
| A*2904                   | —                    | —                    | NM3234  | AF042188, AF042189   |  |
| <b>A*2905</b>            | —                    | —                    | BY0020  | AY042684, AY042685   | CK Hurley                              |
| <b>A*2906</b>            | —                    | —                    | GN00412   | AY062005, AY062006   | CK Hurley                              |
| A*3001                   | A30(19)              | A30.3, A30RSR        | LBF, RSH  | M30576, M28414, U07234   |  |
| A*3002                   | A30(19)              | A30.2                | CR-B, T.B.B.  | X61702, AF148862   |  |
| A*3003                   | A30(19)              | A30JS                | JS, HT  | M93657   |  |
| A*3004                   | A30(19)              | A*30AD, A30W7, A30JW | AD7563, W7(CC), ASE   | U18988, U19734, Z34921, X83770, X83771   |  |
| A*3006                   | —                    | —                    | CS48  | AF028713, AF028714   |  |
| A*3007                   | —                    | —                    | 318-409   | AF065642, AF065643   |  |
| A*3008                   | —                    | —                    | I3753   | AJ249308, AJ249309, AJ249310, AJ249311, AJ249312, AJ249313, AJ249314, AJ249315 |  |
| A*3009                   | —                    | A*3002V              | 99-2196, GN00351  | AF198350, AF198351, AF266529, AF266530   |  |
| <b>A*3010</b>            | —                    | —                    | E249  | AF323494, AF323495, AF323496   | D Adorno                               |
| <b>A*3011</b>            | A30(19)              | A*30New              | 19302, 23031  | AJ308423, AJ308424   | (Voorster & van den Berg-Loonen, 2002) |
| <b>A*3012</b>            | —                    | —                    | 0995970   | AF480841   | F Garcia Sanchez                       |
| A*310102                 | A31(19)              | —                    | KRC033, TB, KRC110, JHAF, KT12, 0229                        | M30578, M28416, M84375, M86405, L78918, AJ239045, AJ239046                     |  |
| A*3102                   | —                    | —                    | NM2492  | AF041369, AF041370   |  |
| A*3103                   | —                    | A*3101v              | NDS-MA  | AF067438, AF067439   |  |

**Table 2.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity      | Previous equivalents   | Individual or cell line from which the sequence was derived | Accession number                                 | References or submitting author(s)        |
|--------------------------|----------------------|------------------------|---|--|---|
| A*3104                   | A31(19)              | A31V                   | NMDP#013528641, NMDP#012891701, NMDP#012797924, T.B.B.      | AF105027, AF105028, AF148863                     |   |
| A*3105                   | A31(19)              | A3101V1, A31v(19)      | JCBT1569  | AB032597   |   |
| <b>A*3106</b>            | —                    | —                      | 2000-133-482  | AF440106, AF440107                               | CK Hurley                                 |
| <b>A*3107</b>            | —                    | —                      | BY00041   | AY094132, AY094133                               | CK Hurley                                 |
| <b>A*3108</b>            | —                    | A*19New, A31CT, A*2416 | DD3, CRT  | AF053481, AF053482, AF012767, AJ011699, AJ011700 | L Gebuhrer, (Binder <i>et al.</i> , 2000) |
| A*3201                   | A32(19)              | —                      | AM  | P10314   |   |
| A*3202                   | A32(19)              | —                      | MP  | X97120   |   |
| A*3203                   | —                    | —                      | 023-8001, VTIS70350   | AF072761, AF072762, AF517561, AF517562           | BD Tait <sup>b</sup>                      |
| A*3204                   | —                    | A*0301V                | GN00277, GN00278  | AF139891, AF139892, AF137077, AF137078           |   |
| A*3205                   | —                    | A*32New                | CL183   | AF217560   |   |
| A*3206                   | —                    | A*3201V                | GN00338   | AF226836, AF226837                               |   |
| <b>A*3207</b>            | —                    | —                      | GN00388   | AF359389, AF359390                               | CK Hurley                                 |
| A*3301                   | A33(19)              | Aw33.1, A3301W776R     | JOE, LWAGS, LCL80, W776R                                    | M30580, M28415, U18989, U19735, X83004-5, U83416 |   |
| A*3303                   | A33(19)              | A33NC, A33MK           | CTM4955926, GAO801, LCL82, HOR, IT                          | U09740, U18990, U19736, X83002-3, L06440         |   |
| A*3304                   | —                    | —                      | NM2442  | AF041367, AF041368                               |   |
| A*3305                   | A33(19)              | A*33DU                 | DU, NM5A679, Leiden-QC1504                                  | AF108447, AF108448, AF268401, AF268402, AJ251541 | K Witter <sup>b</sup>                     |
| A*3306                   | —                    | A33 variant            | ASM   | AF234539, AF234540, AF234541                     |   |
| A*3401                   | A34(10)              | —                      | ENA   | X61704   |   |
| A*3402                   | A34(10)              | —                      | WWAI  | X61705   |   |
| A*3403                   | —                    | A*3402V                | 1998-302-1407, GN00377                                      | AF251352, AF251353, AF315685, AF315686           |   |
| A*3404                   | —                    | A34new                 | ATG   | AJ297499, AJ297500                               |   |
| A*3601                   | A36                  | —                      | MASCH   | X61700   |   |
| A*3602                   | —                    | A*3601V                | GN00347   | AF244504, AF244505                               |   |
| <b>A*3603</b>            | A36                  | —                      | HC030101, FG.   | AF384666   | MGJ Tilanus                               |
| A*4301                   | A43                  | —                      | CC, GN00174   | X61703, AF008305, AF008306                       |   |
| A*6601                   | A66(10)              | —                      | 25/1506, TEM, GU5175  | X61711, U17571                                   |   |
| A*6602                   | A66(10)              | —                      | CR-B, MALS, HUT102  | X61712, X51745                                   |   |
| A*6603                   | A10                  | A66KA                  | AKI   | X96638   |   |
| A*6604                   | —                    | —                      | BY00015   | AF321832, AF321833                               |   |
| A*680101                 | A68(28)              | Aw68.1                 | LB, 10063349  | X03070, X03071, AF106692, AJ315642               | A-M Little <sup>b</sup>                   |
| A*680102                 | A68(28)              | Aw68.1                 | GRC187  | L06425   |   |
| A*6802                   | A68(28)              | Aw68.2                 | PA, TO  | U03861   |   |
| A*680301                 | A28                  | A*68new-69A, A68N      | AA859, PIME, 69A, FC  | U41057, U56436, U56437, U43336, AF017311, U89946 |   |
| A*680302                 | A28                  | A68N2                  | GP  | U89947   |   |
| A*6804                   | A68(28) <sup>c</sup> | A*68new-65A            | 65A   | U41844, AF017312                                 |   |
| A*6805                   | A68(28) <sup>c</sup> | A*68new-67A            | 67A   | U43335, AF017313                                 |   |
| A*6806                   | —                    | A*6801Var              | GN00156   | U91627, U91628                                   |   |

**Table 2.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity      | Previous equivalents | Individual or cell line from which the sequence was derived       | Accession number                       | References or submitting author(s) |
|--------------------------|----------------------|----------------------|---|--|------------------------------------|
| A*6807                   | —                    | —                    | NM2514  | AF041371, AF041372                     |                                    |
| A*6808                   | A68(28)              | A68V                 | TER#934   | AJ223972                               |                                    |
| A*6809                   | —                    | —                    | 262-492   | AF072769, AF072770                     |                                    |
| A*6810                   | —                    | A*68011Variant       | 346-00642   | AF108430, AF108431                     |                                    |
| A*6811N                  | Null                 | A68Null              | HP2, OV   | AF101046                               |                                    |
| A*6812                   | A28                  | A*68New              | KE-GF   | AJ238362, AJ238363, AJ238364           |                                    |
| A*6813                   | —                    | A*68KM               | FAH   | AJ238523, AJ238151, AJ238152, AJ238153 |                                    |
| A*6814                   | —                    | A*68xx               | NMDP0247-8661-2   | AF145954, AF145955                     |                                    |
| A*6815                   | —                    | A*6802V              | GN00261, GN00299  | AF135544, AF135545, AF181103, AF181104 |                                    |
| A*6816                   | A68(28)              | A68PA                | PA87  | AF144013                               |                                    |
| A*6817                   | —                    | A*68Dan              | K45, NM5A815  | AJ245567, AF268397, AF268398           |                                    |
| A*6818N                  | Null                 | A*68BLA              | BLA-Fab   | AJ278501                               |                                    |
| A*6819                   | —                    | A*68012V             | GN00376, GN00410  | AF288049, AF288050, AF408168, AF408169 | CK Hurley <sup>b</sup>             |
| <b>A*6820</b>            | —                    | —                    | GN00389   | AF359391, AF359392                     | CK Hurley                          |
| <b>A*6821</b>            | —                    | —                    | 2001-7399   | AF479818, AF479819                     | J Wu                               |
| <b>A*6822</b>            | —                    | —                    | K83467  | AJ420528                               | J Crowley                          |
| A*6901                   | A69(28)              | —                    | IDF, ZM, BJ   | X03158, X03159                         |                                    |
| A*7401                   | A74(19)              | —                    | CC, PDAV, ATUR, GU2037, GU2040                                    | X61701, U17569, U17570                 |                                    |
| A*7402                   | A74(19)              | A*74dc               | DCH-HLA05, BT2358   | X95409, AJ223060                       |                                    |
| A*7403                   | A74(19) <sup>c</sup> | A*74pb               | PEB, JB-R.B.  | X95561, AJ002678                       |                                    |
| A*7404                   | —                    | A*74New              | U3765   | AJ249370                               |                                    |
| A*7405                   | —                    | —                    | NM5A142   | AF255720, AF255721                     |                                    |
| <b>A*7406</b>            | A74(19)              | —                    | VTIS23531   | AF329872, AF329873                     | BD Tait                            |
| <b>A*7407</b>            | —                    | —                    | BY0021  | AY050187, AY050188                     | CK Hurley                          |
| <b>A*7408</b>            | —                    | —                    | 2001-40-660   | AF440110, AF440111                     | CK Hurley                          |
| A*8001                   | A80                  | AX"BG", A-new        | VH, 35020, 35841, 32511, CODI, MIKA, LADA, CTM3953540, CTM1953541 | M94880, L18898, L19403, U03754         |                                    |

<sup>a</sup> Allele names given in bold type have been assigned since the 2000 Nomenclature report.

<sup>b</sup> This reference is to a confirmatory sequence.

<sup>c</sup> HLA specificity provided from the HLA dictionary (Hurley *et al.*, 1997; Schreuder *et al.*, 1999).

**Table 3.** Designations of HLA-B alleles

| HLA alleles <sup>a</sup> | HLA specificity | Previous equivalents | Individual or cell line from which the sequence was derived | Accession number   | References or submitting author(s)               |
|--------------------------|-----------------|----------------------|---|--|--|
| B*070201                 | B7              | B7.2, B*07L          | JY, PP, RD105U, RD105, L5, L7, GN00105, 383008              | M16102, M32317, P01889, U29057, L47338, U49904, U49905, AJ292075, AJ309047 | A-M Little <sup>b</sup> , SGE Marsh <sup>b</sup> |
| B*070202                 | B7              | B*0702V, B*07AD      | HGW12327, DZA10   | Y13567, AJ002675   |  |
| B*070203                 | B7              | B*07N                | RN1373B   | AF002273, AF017314   |  |
| B*0703                   | B703            | BPOT                 | POT71, BPot   | X64454, U21053   |  |
| B*0704                   | B7              | B7E                  | 10243   | U04245   |  |
| B*0705                   | B7              | B*07ZEL              | GEE018, ZEL, CF   | L33922, U18661, U21052   |  |
| B*0706                   | B7              | B7-L79               | L7901   | X91749   |  |
| B*0707                   | B7              | —                    | DAPO  | Z70315   |  |
| B*0708                   | —               | —                    | A.McG   | X99735   |  |
| B*0709                   | B7              | B*07ML, B*07DKDC     | TER#939, DKDC, 011147550                                    | AJ003063, AF106043, AF106044, AF106045, AF132018, AF132019, AF132020       |  |
| B*0710                   | —               | B*07AE               | A.E.  | AJ223602   |  |
| B*0711                   | B7              | B-0702v              | 001524990   | AF056481, AF056482   |  |
| B*0712                   | B7 <sup>c</sup> | —                    | GN00216, GN00232  | AF061865, AF061866, AF072443, AF072444                                     |  |
| B*0713                   | —               | —                    | 346-808   | AF065646, AF065647   |  |
| B*0714                   | —               | B*0707Var            | 012774733, NM4B169, GN00330                                 | AF127806, AF127807, AF132491, AF165854, AF165855, AF205532, AF205533       |  |
| B*0715                   | B7              | B*07021Var           | NM4B274, 4344PL   | AF148809, AF148810, AJ243371, AJ243372                                     |  |
| B*0716                   | —               | B*0703Variant, ?B7   | CT-VC   | AJ237594, AJ237595   |  |
| B*0717                   | B7              | —                    | R99171035G  | AF173936   |  |
| B*0718                   | —               | —                    | CL183   | AF189017   |  |
| B*0719                   | —               | B*0704V              | GN00323, GN00335  | AF198648, AF198649, AF226689, AF226690                                     |  |
| B*0720                   | —               | B*0702V, B*07MSB     | CU26, SMB7N, MHH-000773                                     | AJ251770, AJ251771, AF244146, AF244147, AJ278043, AJ278044                 |  |
| B*0721                   | —               | B*07021new           | NM5b91  | AF255714, AF255715   |  |
| B*0722                   | —               | B*07021variant       | 10009909  | AJ400823   |  |
| B*0723                   | —               | B*07021V             | GN00368   | AF279113, AF279114   |  |
| B*0724                   | B7              | B*07021var           | BEL-LEI   | AJ401222   |  |
| B*0725                   | —               | B*CBU138             | CBU138  | AF313415, AF313416   |  |
| B*0726                   | B7              | B*07BJ               | BSF, 14622  | AF317496, AF317497, AJ311257   |  |
| <b>B*0727</b>            | —               | B*KHOLM              | KHOLM   | AF343000, AF343001   | S Vidal <sup>b</sup>                             |
| <b>B*0728</b>            | —               | B*ALTHO              | ALTHO   | AF402322, AF402323   | H Dunckley                                       |
| <b>B*0729</b>            | —               | —                    | BY0029  | AF443285, AF443286   | H Dunckley                                       |
| <b>B*0730</b>            | —               | —                    | D25857  | AB073300, AB073668   | CK Hurley  |
| <b>B*0731</b>            | —               | —                    | VTIS87843   | AY124570, AY124571   | H Ikeda  |
| B*0801                   | B8              | —                    | LCL721, MF, CGM1, HECO, 12506397                            | M59841, M24036, M28204, L76093, AJ295294                                   | BD Tait  |
| B*0802                   | B8              | B8JON, B8V           | 20015, 19315  | U04244   |  |
| B*0803                   | B8              | B*08NR               | NR  | U28759   |  |
| B*0804                   | —               | B*08New-UW           | BLB, JS, PF   | U67330, U67331, U74386   |  |
| B*0805                   | —               | rn083B               | rn083B  | U88254, AF017315   |  |
| B*0806                   | B8              | B-08v                | 009048430   | AF056483, AF056484   |  |

**Table 3.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity  | Previous equivalents | Individual or cell line from which the sequence was derived                                      | Accession number   | References or submitting author(s) |
|--------------------------|------------------|----------------------|--|--|------------------------------------|
| B*0807                   | B8               | B*NV                 | BM1 101910   | AF105226   |                                    |
| B*0808N                  | Null             | B8Null               | STRIJOHN, RS   | Y18552   |                                    |
| B*0809                   | B8               | B*08HO, B*MW         | H.O., MW-ARCBS, HM-ARCBS, GN00244 GN00287, ANO   | AJ131852, AJ131853, AF117768, AF117769, AF127247, AF127248, AF102559, AF102560, AF176073, AF176074, AJ276994   |                                    |
| B*0810                   | B8               | B*0801Var            | R.E.   | AJ133101, AJ133102   |                                    |
| B*0811                   | —                | —                    | NMDP-ID#035343375  | AF213681, AF213682   |                                    |
| B*0812                   | —                | B*0801V              | GN00344, G3543, GN00371  | AF226150, AF226151, AJ276427, AF279674, AF279675   |                                    |
| B*0813                   | —                | —                    | 2000-21-622-7  | AF310144, AF310145   |                                    |
| <b>B*0814</b>            | —                | —                    | GN00386  | AY016211, AY016212   | (Steiner et al., 2001a)            |
| <b>B*0815</b>            | —                | —                    | VTIS37741  | AY057398, AY057399   | BD Tait                            |
| <b>B*0816</b>            | —                | —                    | 026575043  | AF468046, AF468047   | TM Williams                        |
| B*1301                   | B13              | B13.1                | HE, SDI, YTY, TAC  | M24075, D50290   |                                    |
| B*1302                   | B13              | B13.2, B13N          | LBF, TO, HJB, PKM, TAC, L7901  | M19757, M24041, D50291, AJ295278   |                                    |
| B*1303                   | —                | B New                | CTM4956865, CTM2956866   | U14943   |                                    |
| B*1304                   | —                | B*15x21              | TER847, 27B, 76002   | U75533, U88248, AF017316, Y12378, Y12379   |                                    |
| B*1306                   | —                | B*1301V              | GN00336  | AF226691, AF226692   |                                    |
| B*1307N                  | Null             | B1301V1              | JCB13747   | AB032598   |                                    |
| <b>B*1308</b>            | —                | —                    | PACO   | AJ295279   | V Carter                           |
| <b>B*1309</b>            | —                | —                    | 2000-112-197   | AY034808, AY034809   | CK Hurley                          |
| <b>B*1310</b>            | —                | —                    | 2001-7709  | AF461046, AF461047   | TM Williams                        |
| B*1401                   | B64(14)          | —                    | MRWC, 32367, W6106, WT51   | M24040, X94574   |                                    |
| B*1402                   | B65(14)          | —                    | BB, CGM1, CM1402, 10038822   | M59840, M24032, U90558, AJ301657   |                                    |
| B*1403                   | B14 <sup>c</sup> | B*1402v              | DT16, DT3, E210  | U91330, U91331, AF015271, AF015272, AF279664   |                                    |
| B*1404                   | —                | B*14N                | RN1429B  | AF002275, AF017317   |                                    |
| B*1405                   | —                | —                    | S18, 012867131   | AF031142, AF031143, AF110259, AF110260, AF110261   |                                    |
| B*140601                 | B14              | Sofh3713, wk B14     | FLi  | AJ131193, AJ131194   |                                    |
| B*140602                 | B14              | B*1402Variant        | GN00248  | AF102567, AF102568   |                                    |
| B*15010101               | B62(15)          | —                    | MF, HA, BCK, OLGA (OLLI) <sup>c</sup> , KT17, PP, FUR, YAG, BA3, BA4, BA5                        | M28203, M83193, U03859, D50292, L48400, AJ295140   |                                    |
| B*15010102N              | Null             | BM1947               | BEL-13-JA  | Y17110   |                                    |
| B*150102                 | B62(15)          | B*1501Var1           | PUSPAT, BWH56458, NMDP#015329287, NMDP#015329535, NMDP#015329246, NMDP#015329097, NMDP#015329436 | Y17063, Y17168, AF053999, AF054000, AF106626, AF106627   |                                    |
| B*150103                 | B62(15)          | B*15New              | AG-SP  | AF109724, AF109725   |                                    |
| B*150104                 | B62(15)          | B*15SRE              | ET79538  | AJ297940, AJ297941   |                                    |
| B*1502                   | B75(15)          | B15N, B*1502         | APA, LW, CAY, DCH4060, DCH4061, DCH3086, 12WDCH018, 12WDCH017, 12WDCH002, 12WDCH003, 12WDCH016   | M75138, M83192, D50293, AF014769, AF014770, AF014771, AF014772, AF014773, AF014774, AF014775, AF014776, AF014777, AF014778, AF014779, AF014780, AF014781, AF014782, AF014783, AF014784 |                                    |

**Table 3.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity      | Previous equivalents          | Individual or cell line from which the sequence was derived           | Accession number   | References or submitting author(s) |
|--------------------------|----------------------|-------------------------------|---|--|------------------------------------|
| B*1503                   | B72(70)              | —                             | CC, 26931, 31708  | X61709   |                                    |
| B*1504                   | B62(15)              | Bw62-G                        | GRC138, KG, GRC187, GRC-150   | M84382, AJ292970   |                                    |
| B*1505                   | B62(15)              | Bw62.1                        | VB  | M83191   |                                    |
| B*1506                   | B62(15)              | Bw62.4                        | WI  | M83194   |                                    |
| B*1507                   | B62(15)              | Bw62.5                        | SB  | M83195   |                                    |
| B*1508                   | B75(15)              | B62variant                    | KHAGNI, LATIF, DAN723   | L11666   |                                    |
| B*1509                   | B70                  | B70.1                         | 34863   | L11571   |                                    |
| B*1510                   | B71(70)              | B70.2                         | 25514, 19014, GU373, GU2092, GU2037, GU5175                           | L11570, U11262, U11264, U11269   |                                    |
| B*151101                 | B75(15)              | B15variant, B75v              | LEE743, AZ195, AZ319  | L11604, D50294   |                                    |
| B*151102                 | B75(15)              | B1511V1                       | JCBT2513  | AB036051   |                                    |
| B*1512                   | B76(15)              | B76                           | THAI742   | L11603   |                                    |
| B*1513                   | B77(15)              | B77                           | RSA-ND, CAM020, PETCH, 12WDCH009, 12WDCH010, 12WDCH011, 12WDCH028     | L15005, D50295, U90424, U90425, U90422, U90423, U90420, U90421, U90418, U90419   |                                    |
| B*1514                   | B76(15)              | B76                           | SS713   | L19937   |                                    |
| B*1515                   | B62(15)              | B62s                          | MLH727, LDM   | L22027, L49343   |                                    |
| B*1516                   | B63(15)              | B63.1, 8W66                   | DOP-ND, 21909, 31133  | L09735   |                                    |
| B*15170101               | B63(15)              | B63                           | JAP-NF, PARMG   | U01848, U35431, AJ300181   | A-M Little <sup>b</sup>            |
| <b>B*15170102</b>        | B63(15)              | B*1517var                     | Terasaki EXT#95   | AJ308397   | A-M Little                         |
| B*1518                   | B71(70)              | B*7901, B"X"-HS, B71          | HS, GU2739, GU2760, MSU, ML108, ML108U                                | U11266, U11268, D50296, U57966   |                                    |
| B*1519                   | B76(15)              | B76                           | GEE018  | U03027   |                                    |
| B*1520                   | B62(15)              | —                             | OLGA (OLL), KRC110  | U06862   |                                    |
| B*1521                   | B75(15)              | B15Ab                         | BJ, HWY, 14247373, 12WDCH022  | L32862, D44500, U32678, U91332, U91333   |                                    |
| B*1523                   | —                    | B'NM5'                        | TK765   | L37881   |                                    |
| B*1524                   | B62(15)              | B*15ZEL, 1501-B4a, B*1501-Bw4 | ZEL, SF94-140   | U16309, L42146   |                                    |
| B*1525                   | B62(15)              | B*15AOH, B*1525               | WON, M, HM, BY0007, 12WDCH012, 12WDCH023, 12WDCH025, DCH3258, DCH1109 | U18660, U50710, U52177, U52178, U91336, U91337, U91334, U91335, AF014785, AF014786, AF014787, AF014788, AF014789, AF014790 |                                    |
| B*1526N                  | Null                 | B-null                        | K.I.  | D49824   |                                    |
| B*1527                   | B62(15)              | —                             | PELE  | L42144, L40182   |                                    |
| B*1528                   | B62(15) <sup>c</sup> | B15v1                         | YTR   | D44499   |                                    |
| B*1529                   | B15                  | B15v3                         | DKA   | D44501   |                                    |
| B*1530                   | B62(15)              | B*1501V1                      | EFTO, GN00104, GN00108  | L42296, U49900, U49901, U52171, U52172   |                                    |
| B*1531                   | B75(15)              | B*1502V                       | ALDE, GN00110   | L42145, U52173, U52174   |                                    |
| B*1532                   | B62(15)              | —                             | DCH036, 12WDCH038, 12WDCH027  | X95410, U83580, U83581   |                                    |
| B*1533                   | B15                  | —                             | GN00103   | U49898, U49899   |                                    |
| B*1534                   | B15                  | —                             | GN00105   | U49902, U49903   |                                    |
| B*1535                   | B62(15) <sup>c</sup> | —                             | GN00106   | U52167, U52168   |                                    |
| B*1536                   | —                    | B*15MD                        | MD674   | U58315, U58316   |                                    |
| B*1537                   | B70 <sup>c</sup>     | —                             | 11112331, CTM1984782  | U55022, U55023, AF016641   |                                    |
| B*1538                   | —                    | —                             | #10   | U95084, U95085   |                                    |

**Table 3.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity      | Previous equivalents | Individual or cell line from which the sequence was derived | Accession number   | References or submitting author(s) |
|--------------------------|----------------------|----------------------|---|--|------------------------------------|
| B*1539                   | B62(15) <sup>c</sup> | ZA016, B*15MZH       | ZA016, GN00177, T228, NM3906                                | AF016302, AF009681, AF017080, AF017081, AF033501, AF033502, AF060504, AF060505   |                                    |
| B*1540                   | —                    | —                    | GN00181, GN00206  | AF028597, AF028598, AF054003, AF054004   |                                    |
| B*1542                   | —                    | B*15/55Var           | PB(16962)   | Y15841   |                                    |
| B*1543                   | —                    | B*1501Var2           | GN00211   | AF054011, AF054012   |                                    |
| B*1544                   | —                    | B*1521Var            | GN00212   | AF061857, AF061858   |                                    |
| B*1545                   | B62(15)              | B*15JL               | J.L., GN00219   | AJ007605, AJ007606, AF071765, AF071766   |                                    |
| B*1546                   | B72(70)              | B*15UL, B1501V2      | S.Z., 97-02707, JCBB13806                                   | AJ007603, AJ007604, AF110250, AF110251, AF110252, AB036049   |                                    |
| B*1547                   | —                    | —                    | 346-516   | AF07265, AF072266  |                                    |
| B*1548                   | B62(15)              | —                    | 009326174/HR1858  | AF072377, AF072378   |                                    |
| B*1549                   | —                    | B*1503V              | NMDP#016220287  | AF105029, AF105030   |                                    |
| B*1550                   | —                    | B*1501Variant        | 121-08035   | AF108424, AF108425   |                                    |
| B*1551                   | B70                  | B*NO = B*27New       | NO-ARCBS  | AF117766, AF117767   |                                    |
| B*1552                   | —                    | B*15Variant          | 01223584, UCLA01203301, GN00288, 99-2200, GN00328, GN00343  | AF127810, AF127811, AF132488, AF172869, AF172870, AF176075, AF176076, AF189248, AF189249, AF189250, AF202451, AF202452, AF226152, AF226153 |                                    |
| B*1553                   | —                    | B*15 Variant         | 012436002   | AF129296, AF129297, AF132487   |                                    |
| B*1554                   | —                    | B*1503v              | GN00257, E3541  | AF135536, AF135537, AJ245869   |                                    |
| B*1555                   | B15                  | B*1531new            | T2059   | AJ249316, AJ249317, AJ249318, AJ249319, AJ249320, AJ249321, AJ249322   |                                    |
| B*1556                   | —                    | B*1501V2             | GN00315   | AF181846, AF181847   |                                    |
| B*1557                   | —                    | B*15New              | NDS-758   | AF188885, AF188886, AF188887   |                                    |
| B*1558                   | B15                  | B*15KSW, ?B62(15)    | 99-2202, KSW  | AF190278, AF190279, AF190280, AF184607, AF226152, AF184608   |                                    |
| B*1560                   | —                    | B1501V4              | JCBT1283  | AB036050   |                                    |
| B*1561                   | —                    | B*1503V              | 1999-158-3366   | AF251356, AF251357   |                                    |
| B*1562                   | —                    | —                    | GN00363   | AF266527, AF266528   |                                    |
| B*1563                   | —                    | B*1545V              | Toba44, GN00364   | AF275626, AF275627, AF281150, AF281151   |                                    |
| B*1564                   | —                    | B*1518V              | GN00367   | AF279111, AF279112   |                                    |
| <b>B*1565</b>            | —                    | B*CB3654             | CB3654  | AF335310, AF335311   | H Dunckley                         |
| <b>B*1566</b>            | —                    | —                    | UCB-163-1999  | AJ308399   | (Cox <i>et al.</i> , 2002b)        |
| <b>B*1567</b>            | —                    | —                    | MCH104, ML1777  | AF335547   | (Luo <i>et al.</i> , 2002)         |
| <b>B*1568</b>            | —                    | B*15/48              | 13365831  | AY033429, AY033430, AY033431   | (Sheldon <i>et al.</i> , 2002)     |
| <b>B*1569</b>            | —                    | B*15var              | BHCP  | AJ298282, AJ298289   | (Smillie <i>et al.</i> , 2002)     |
| <b>B*1570</b>            | B62(15)              | —                    | 285D  | AY057402, AY057403   | BD Tait                            |
| <b>B*1571</b>            | B62(15)              | —                    | FH66, FH67  | AY065827, AY065828, AY065829   | A Smith                            |
| <b>B*1572</b>            | —                    | —                    | FH60  | AY065830, AY065831, AY065832   | A Smith                            |
| <b>B*1573</b>            | B62(15)              | —                    | 11470, 28580  | AJ459483, AJ489936, AJ489937   | S Vidal, T Gervais                 |
| B*180101                 | B18                  | —                    | SGAR, F24, MM1801, VEN                                      | M24039, U90559, AJ310507   | A-M Little <sup>b</sup>            |
| <b>B*180102</b>          | B18                  | —                    | 6ABC124   | AY045737, AY045738   | WH Hildebrand                      |

**Table 3.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity | Previous equivalents | Individual or cell line from which the sequence was derived | Accession number                                    | References or submitting author(s)                             |
|--------------------------|-----------------|----------------------|---|---|--|
| B*1802                   | B18             | B18PE                | PETCH   | D25275  |  |
| B*1803                   | B18             | B1803                | BM66, GSW002, T36121  | X94480, Y07824, AJ309979                            |  |
| B*1804                   | —               | B*18IM               | IMM348  | U38792, U38793                                      |  |
| B*1805                   | B18             | B*18GSW              | GSW001, DZA1  | Y07710, AJ002676                                    |  |
| B*1806                   | B18             | —                    | CTM-9985836   | AF033351  |  |
| B*1807                   | —               | B*MF                 | GN00210, MF-ARCBS   | AF054009, AF054010, AF117774, AF117775              | P Dunn <sup>b</sup>  |
| B*1808                   | —               | B*1801New            | NM4b448   | AF148636, AF148637                                  |  |
| B*1809                   | B18             | B18OP                | 6259OP, GN00345   | AJ243374, AJ243376, AF274500, AF274501              |  |
| B*1810                   | —               | B*1801V              | GN00324   | AF198650, AF198651                                  |  |
| B*1811                   | —               | —                    | GN00362   | AF266525, AF266526                                  |  |
| B*1812                   | —               | B*1801V              | GN00366   | AF275716, AF275717                                  |  |
| B*1813                   | —               | —                    | 2000-56-617   | AF310138, AF310139                                  |  |
| <b>B*1814</b>            | —               | —                    | 2000-224-257, 00-809  | AY042672, AY042673, AF403249                        | CK Hurley, LA Baxter-Lowe                                      |
| <b>B*1815</b>            | —               | —                    | 2000-084-2159   | AY042686, AY042687                                  | CK Hurley  |
| <b>B*1817N</b>           | —               | —                    | WVAN, AVAN  | AF416771  | (den Hollander <i>et al.</i> , 2002)                           |
| <b>B*1818</b>            | —               | —                    | 28626   | AJ489938, AJ489939                                  | T Gervais  |
| B*2701                   | B27             | 27f                  | LH, PIL-139   | L76935  |  |
| B*2702                   | B27             | 27e, 27K, B27.2      | BRUG, NV, KSH   | X03664, X03667, L38504, U18659                      |  |
| B*2703                   | B27             | 27d, 27J             | CH (CHI)  | M54883  |  |
| B*2704                   | B27             | 27b, 27C, B27.3      | WEWAK 1, DH, DEW-ND   | U27608  |  |
| B*270502                 | B27             | 27a, 27W, B27.1      | CD, HC, MRWC, KCA, MVL,<br>LG2, BRUG BTB                    | X03945, M12967, L20086, M14013, M12678,<br>AJ420238 | A-M Little <sup>b</sup>  |
| B*270503                 | B27             | B27MW                | HHE   | X83727, X83737                                      |  |
| B*270504                 | B27             | FMVB27               | 20836   | AJ250630, AJ250631, AJ250632                        |  |
| <b>B*270505</b>          | B27             | —                    | 8998871, 6998872  | AF480612  | F Garcia Sanchez<br>(Witter <i>et al.</i> , 2001) <sup>b</sup> |
| B*2706                   | B27             | 27D, B27.4           | LIE, PAR, TER Cell#995                                      | X73578, U35734, AJ292971                            |  |
| B*2707                   | B27             | B27-HS               | HS  | M62852  |  |
| B*2708                   | B2708           | B7Qui                | 19418, BCK  | L19923  |  |
| B*2709                   | B27             | B27-ci               | Ci  | Z33453  |  |
| B*2710                   | B27             | B2705v               | KRICO, NMDP0392-7903-9                                      | L76095, AJ308990, AJ310147                          | M Bengtsson <sup>b</sup>                                       |
| B*2711                   | B27             | B27KH                | K.H.  | D83043  |  |
| B*2712                   | —               | WIS1/C846            | RW, MT3, RK, CTM4896  | U90244, U90245, Y14582, AF022783                    |  |
| B*2713                   | B27             | B27052W496D          | W496D   | AF026218  |  |
| B*2714                   | —               | —                    | 65-90810, 01168999  | AF072763, AF072764, AF110256, AF110257,<br>AF110258 |  |
| B*2715                   | —               | B''X''-Bw6           | KC  | Y16637, Y16638                                      |  |
| B*2716                   | —               | B*27052Variant       | GN00246   | AF102563, AF102564                                  |  |
| B*2717                   | B27             | B27TO                | 4388TO  | AJ243373, AJ243375                                  |  |
| B*2718                   | —               | —                    | 99-2198   | AF189012, AF189013, AF189014                        |  |
| B*2719                   | B27             | —                    | BFLR  | AF190146, AF190147                                  |  |
| B*2720                   | B27             | B*27CHN              | KMP01-1379  | AF170578, AF170579                                  |  |
| B*2721                   | —               | B*2706V              | GN00334   | AF218578, AF218579                                  |  |

**Table 3.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity  | Previous equivalents    | Individual or cell line from which the sequence was derived | Accession number                                 | References or submitting author(s) |
|--------------------------|------------------|-------------------------|---|--|------------------------------------|
| B*2723                   | —                | B*271G                  | 30733VTIS, 35520  | AF305196, AF305197, AJ298262                     | M Gutridge <sup>b</sup>            |
| <b>B*2724</b>            | —                | —                       | 2000-161-3004   | AY042670, AY042671                               | CK Hurley                          |
| <b>B*2725</b>            | —                | —                       | 2000-119-979  | AF408160, AF408161                               | CK Hurley                          |
| B*350101                 | B35              | —                       | HS, KT17, GU2739, CMM, KT12                                 | M28109-12, U11265, L63544, AJ420239              | A-M Little <sup>b</sup>            |
| B*350102                 | B35              | —                       | GN00356   | AF260977, AF260978                               |                                    |
| B*3502                   | B35              | —                       | DL, 388   | M63454, U90563                                   |                                    |
| B*3503                   | B35              | —                       | C1R, HMY2, 12405, 13159, 093                                | M81798, D50299, U90564                           |                                    |
| B*3504                   | B35              | —                       | AN, RB22, 12.36JK   | M86403, U30936, L47986                           |                                    |
| B*3505                   | B35              | B35-G                   | GRC212, KRC032, TOB-115                                     | M84385, L76930                                   |                                    |
| B*3506                   | B35              | B35-K                   | KRC032  | M84381   |                                    |
| B*3507                   | B35              | —                       | #20073  | L04695   |                                    |
| B*3508                   | B35              | B35TL                   | #22338, TL  | L04696, Z22651                                   |                                    |
| B*350901                 | B35              | —                       | MA9, 30   | U17107, U90565                                   |                                    |
| B*350902                 | B35              | —                       | WIC-54  | L76932   |                                    |
| B*3510                   | B35 <sup>c</sup> | —                       | JK1.2, JK5.13, JK14.41                                      | L36979   |                                    |
| B*3511                   | B35              | B35v                    | GRC-187   | L40599   |                                    |
| B*3512                   | B35              | B-3504v                 | BAON, FEME, PNS   | L42281, L76094, L49342                           |                                    |
| B*3513                   | B35              | 2993                    | RCE80, THA-DCH 0654, THA-DCH 9675                           | X87268, AF208430, AF208431, AF208432, AF208433   |                                    |
| B*3514                   | B35              | B*35M                   | JLG, JGS  | S83195, S83196                                   |                                    |
| B*3515                   | B35              | —                       | PARMG   | U30904   |                                    |
| B*3516                   | B35 <sup>c</sup> | B*35GAR                 | GAR   | U29880   |                                    |
| B*3517                   | B35              | B35V1, B*35PNS, B-3505v | JM (G2744), PNS, AMYE                                       | U34618, L49341, L75941                           |                                    |
| B*3518                   | B35              | B-3508v                 | TOB-137   | L75942   |                                    |
| B*3519                   | B35              | B-40x35                 | WIC-54, VTIS43878   | L76933, AF387905, AF387906                       | BD Tait <sup>b</sup>               |
| B*3520                   | B35              | B-3501V                 | TER-135   | U76392, U76393                                   |                                    |
| B*3521                   | —                | B-3511H                 | TER-109   | U76390, U76391                                   |                                    |
| B*3522                   | —                | M001B                   | M001B   | AF017327, AF009685                               |                                    |
| B*3523                   | —                | MA080B                  | MA080B  | AF016301, AF009680                               |                                    |
| B*3524                   | —                | MA086B                  | MA086B  | AF016300, AF009679                               |                                    |
| B*3525                   | —                | —                       | GN00215   | AF061863, AF061864                               |                                    |
| B*3526                   | —                | B15/35 7-1 clone 24     | NMDP#027669746  | AF105031, AF105032                               |                                    |
| B*3527                   | B35              | B*35JAC                 | JAC   | Y18288, Y18289                                   |                                    |
| B*3528                   | —                | B*3510Variant           | 304-00651, 016696205  | AF108428, AF108429, AF127808, AF127809, AF132486 |                                    |
| B*3529                   | B35              | B*KG                    | KG-ARCBS, GN00289   | AF117770, AF117771, AF176077, AF176078           |                                    |
| B*3530                   | B35              | B*3517Variant           | GN00242   | AF110504, AF110505                               |                                    |
| B*3531                   | —                | B*35/40                 | KYR, KKW, MOV   | AF138164, AF138165, AF170577, AJ278744           |                                    |
| B*3532                   | B35              | B*TMUL                  | BM1 139852  | AF134866, AF134867                               |                                    |
| B*3533                   | —                | B*35New                 | 0000-3034-6   | AJ238411, AJ238412                               |                                    |
| B*3534                   | —                | —                       | GN00329   | AF205530, AF205531, AF201762                     |                                    |
| B*3535                   | B35              | B3501V1, B35v           | JCBT1635  | AB032093   |                                    |
| B*3536                   | —                | B*3503V                 | GN00353   | AF282765, AF282766                               |                                    |

**Table 3.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity      | Previous equivalents                    | Individual or cell line from which the sequence was derived | Accession number                                   | References or submitting author(s)                 |
|--------------------------|----------------------|---|---|--|--|
| B*3537                   | —                    | B*35KM                                  | DZA1999-16/MHH994949  | AJ243737, AJ243738                                 |  |
| <b>B*3538</b>            | —                    | —                                       | BSB620, BSB620-MO   | AJ312287   | K Witter   |
| <b>B*3539</b>            | —                    | —                                       | 2000-140-1975   | AY042688, AY042689                                 | CK Hurley  |
| <b>B*3540N</b>           | —                    | —                                       | IBTC-B35N   | AJ418040   | (Dunne <i>et al.</i> , 2002)                       |
| <b>B*3541</b>            | B35                  | —                                       | 2HT21, WAC1087870, CAP13                                    | AY045735, AY045736, AF480613, AF497262             | WH Hildebrand, F Garcia Sanchez, D Smith           |
| <b>B*3542</b>            | B35                  | —                                       | MS21871   | AJ316289, AJ426469, AJ426468, AJ417680, AJ417669   | EM van den Berg-Loonen                             |
| <b>B*3543</b>            | B35                  | B15UW1, B35V2, B*1522, B35 7-1 clone 27 | 1274, B503, JC (G2997), FFAJ, NMDP#027669746                | U14756, L42506, U34619, U80945, AF106630, AF106631 |  |
| <b>B*3544</b>            | B35                  | B*1559                                  | 013221023   | AF206514, AF206515                                 |  |
| B*3701                   | B37                  | —                                       | KAS011, MG, GU2760  | M32320, U11267                                     |  |
| B*3702                   | —                    | B27-37                                  | CTM-8958127   | U31971   |  |
| B*3703N                  | Null                 | B*37OMI                                 | OMI   | AJ277845   |  |
| B*3704                   | —                    | —                                       | GN00382, H156H2   | AF303101, AF303102, AF389378                       | (Estefanía <i>et al.</i> , 2002) <sup>b</sup>      |
| B*3705                   | —                    | —                                       | CMC2  | AF284826, AF284827, AF284828                       |  |
| B*3801                   | B38(16)              | B16.1                                   | Z, JAP-NF, YAR, JBUSH, TEM, WDV, ELON, LB96-SAR             | M29864, L36591, U40498                             |  |
| B*380201                 | B38(16)              | —                                       | RSA-ND, Terasaki EXT#58, 32764                              | L22028, AJ297317, AJ308991, AJ308992               | A-M Little <sup>b</sup> , M Guttridge <sup>b</sup> |
| B*380202                 | B38(16)              | —                                       | GN00155, GN00416  | U90240, U90241, AY094134, AY094135                 | CK Hurley <sup>b</sup>                             |
| B*3803                   | B16                  | —                                       | CTM-4786786   | AF081275, AF081276                                 |  |
| B*3804                   | —                    | —                                       | 49-TA   | AF181857, AF181858                                 |  |
| B*3805                   | B38(16)              | B*38New                                 | CTM-1095139   | AF218802, AF218803, AF218804                       |  |
| B*3806                   | —                    | —                                       | GN00357, GN00372  | AF262960, AF262961, AF282769, AF282770             |  |
| B*3807                   | —                    | B*3801New                               | MCB4  | AF281053, AF281054                                 |  |
| <b>B*3808</b>            | —                    | B*SSHAM                                 | SSHAM   | AF402320, AF402321                                 | H Dunckley   |
| B*390101                 | B3901                | B39.1, B16.2                            | S, JC   | M94052, M29865                                     |  |
| B*390103                 | B3901                | B39.1J                                  | IT, #591  | M94051   |  |
| B*390104                 | B3901                | B*39011New                              | NM4B380, JCB11331   | AF165852, AF165853, AB032096                       |  |
| B*390201                 | B3902                | B39.2                                   | YAM   | M94053   |  |
| B*390202                 | B3902                | B39.2                                   | CL170   | U04243   |  |
| B*3903                   | B39(16)              | —                                       | AUCA#19, VTIS46155  | L20088, AF387907, AF387908                         | BD Tait <sup>b</sup>                               |
| B*3904                   | B39(16)              | B39N                                    | TO ?KO  | L22649   |  |
| B*3905                   | B16                  | ST-16, B*39UW1, B*39JAI                 | 11, HGOM, 12.35JK, 12.63JK                                  | U15638, L36318, L36980                             |  |
| B*390601                 | B39(16)              | B*39UW2                                 | 15, HAA, BA1, TER-102                                       | U15639, L42024, L76640, L76639, U76396, U76397     |  |
| B*390602                 | B39(16)              | B*39DBU, B39G                           | DBU, GVA, CVL, RD105, NAVAJO                                | U16298, L40562, U29083, U32660                     |  |
| B*3907                   | B39(16) <sup>c</sup> | B*39UW3                                 | 1276  | U15640   |  |
| B*3908                   | B39(16)              | —                                       | 822   | L42280   |  |
| B*3909                   | B39(16)              | B39-143.2                               | 143.2, XAV-50, 072  | U29480, L76088, U90580                             |  |
| B*3910                   | B39(16)              | B39.ZU47                                | ZU47, GN00110, GB32, MA-31750                               | U56246, U52175, U52176, Y09058, AJ237703           |  |
| B*3911                   | B39(16) <sup>c</sup> | —                                       | KUNA 20   | U74387   |  |
| B*3912                   | B39(16)              | B-3901V                                 | TER-103   | U76394, U76395                                     |  |
| B*3913                   | B39(16)              | —                                       | MCDS  | AJ223282   |  |

**Table 3.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity      | Previous equivalents                | Individual or cell line from which the sequence was derived   | Accession number   | References or submitting author(s) |
|--------------------------|----------------------|-------------------------------------|---|--|------------------------------------|
| B*3914                   | —                    | —                                   | GN00217   | AF061867, AF061868   |                                    |
| B*3915                   | —                    | —                                   | 178-260   | AF065640, AF065641   |                                    |
| B*3916                   | —                    | BA-39 V                             | BAKA  | AF098266, AF098267   |                                    |
| B*3917                   | —                    | B*39Var                             | 010760981   | AF110262, AF110263, AF110264   |                                    |
| B*3918                   | —                    | B*39011V                            | GN00310   | AF173875, AF173876   |                                    |
| B*3919                   | —                    | B*3901V                             | GN00293   | AF176081, AF176082   |                                    |
| B*3920                   | —                    | B*3910V                             | GN00317   | AF184216, AF184217   |                                    |
| B*3922                   | —                    | —                                   | GN00332   | AF205536, AF205537   |                                    |
| B*3923                   | B39(16)              | B3902V1                             | JCB12110  | AB032097   |                                    |
| B*3924                   | B39(16)              | B*CB2261, B*3903V                   | NDS-IH, CBu 10474, POHS-397, OC311, OC350, OC311, OC350, C183 | AF220288, AF220289, AF231101, AF231102, AF293020, AF293021, AF293022, AJ251768, AJ251769, AJ251768, AJ251769, AF428252 | C Vilches <sup>b</sup>             |
| <b>B*3925N</b>           | —                    | —                                   | 13W09502  | AF363012, AF363013, AF363014   | A Smith                            |
| <b>B*3926</b>            | —                    | —                                   | 2000-333-343  | AF408162, AF408163   | CK Hurley                          |
| B*400101                 | B60(40)              | —                                   | LB  | P01890, U03698   |                                    |
| B*400102                 | B60(40)              | B60Ut                               | Ut-m, JD, #W7079  | M95530, L41628   |                                    |
| <b>B*400103</b>          | B60(40)              | B*40(93090)                         | 93090   | AJ309573   | A Dormoy                           |
| B*4002                   | B61(40)              | B40*                                | SWEIG, CALOGERO, YUKI, 19014, TOB-105                         | L09736, D14343, L76089   |                                    |
| B*4003                   | B61(40) <sup>c</sup> | B40-G1                              | GRC138  | M84383   |                                    |
| B*4004                   | B61(40) <sup>c</sup> | B40-G2                              | GRC212, TOB-0087  | M84384, L76090   |                                    |
| B*4005                   | B4005                | BN21                                | 00136   | M84694   |                                    |
| B*40060101               | B61(40)              | B61                                 | Ot-s  | M95531, AJ300180   | A-M Little <sup>b</sup>            |
| <b>B*40060102</b>        | B61(40)              | B*4006new                           | Terasaki EXT#58   | AJ292253   | A-M Little                         |
| B*4007                   | B60(40) <sup>c</sup> | B'Fu'                               | MSU, FTA, KTA   | D31816   |                                    |
| B*4008                   | —                    | —                                   | 4008  | L41353   |                                    |
| B*4009                   | B61(40)              | B-4003V                             | PIL-117   | L76934   |                                    |
| B*4010                   | B60(40)              | B*40MD, B*40Var, B*40011Var, B40New | MD676, GN00160, 10PNG, PK, NMDP#019350966                     | U58643, U58644, U93915, U93916, Y15840, Y16636, Y16639, AF106628, AF106629   |                                    |
| B*4011                   | B40                  | B*40N                               | 098, UCLA160  | U75864, U75865, AF016299, AF009682   |                                    |
| B*4012                   | —                    | B*40×15                             | TER-914, TE914, 015740137/467                                 | Y13029, AF017334, AF017335, AF132492, AF132493, AF132494   |                                    |
| B*4013                   | —                    | —                                   | NBER  | U96942   |                                    |
| B*4014                   | —                    | —                                   | 104B  | AF002274, AF017318   |                                    |
| B*4015                   | —                    | —                                   | M008B   | AF002268, AF002269   |                                    |
| B*4016                   | B61(40)              | —                                   | EW, CS25, CS48, 98-00101                                      | Y14606, AF017022, AF017023, AF027296, AF027297, AF110253, AF110254, AF110255   |                                    |
| B*4018                   | —                    | RN988B                              | RN988B  | AF017332, AF017333   |                                    |
| B*4019                   | —                    | —                                   | 329-8016  | AF065644, AF065645   |                                    |
| B*4020                   | —                    | —                                   | 290-596, 010818557  | AF065648, AF065649, AF127812, AF127813, AF132017   |                                    |
| B*4021                   | —                    | B*15Var                             | CBP, #6749  | AF106686, AF106687   |                                    |
| B*4022N                  | Null                 | B40VN                               | 40FC  | AF129291, AF129292   |                                    |

**Table 3.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity  | Previous equivalents | Individual or cell line from which the sequence was derived | Accession number   | References or submitting author(s)    |
|--------------------------|------------------|----------------------|---|--|---------------------------------------|
| B*4023                   | —                | B*40Var, B*CB2880    | 011743051, 702502, CB2880                                   | AF129298, AF129299, AF132489, AJ278749, AJ278750, AF335312, AF335313 | H Dunckley <sup>b</sup>               |
| B*4024                   | —                | B*4018Variant        | GN00251   | AF102573, AF102574   |                                       |
| B*4025                   | —                | B*BM                 | BM1 131485  | AF134864, AF134865   |                                       |
| B*4026                   | B21              | B40Var               | Akbasaim  | AJ243433, AJ243434   |                                       |
| B*4027                   | B61(40)          | B*4002V1             | JC12323, GN00316  | AB030575, AF181471, AF181472   |                                       |
| B*4028                   | —                | B*4004V              | GN00313   | AF181842, AF181843   |                                       |
| B*4029                   | B61(40)          | B4002V2, B61v(40)    | JC16904   | AB032599   |                                       |
| B*4030                   | —                | B*40011V             | GN00340, GN00352, GN00373                                   | AF226840, AF226841, AF257507, AF257508, AF282767, AF282768           |                                       |
| B*4031                   | B60(40)          | B*40RG               | 33692   | AJ271160   |                                       |
| B*4032                   | —                | B*4016V              | GN00361   | AF266523, AF266524   |                                       |
| B*4033                   | —                | B*40011V             | GN00369   | AF279115, AF279116   |                                       |
| B*4034                   | B60(40)          | B*40var              | 386619  | AJ404846   |                                       |
| B*4035                   | —                | —                    | ZFI   | AJ290949, AJ290950   |                                       |
| <b>B*4036</b>            | —                | B*RRACH              | RRACH   | AY034093, AY034094   | H Dunckley                            |
| <b>B*4037</b>            | —                | B*4002V              | 2000-343-446, 2000-343-785                                  | AY034806, AY034807, AY042676, AY042677                               | CK Hurley                             |
| <b>B*4038</b>            | —                | —                    | VTIS39243   | AF387901, AF387902   | BD Tait                               |
| <b>B*4039</b>            | —                | —                    | BUMC-40v  | AY040540   | D Smith                               |
| <b>B*4040</b>            | —                | —                    | BY0018, BY0025, BY0022                                      | AY042680, AY042681, AY050193, AY050194, AY050189, AY050190           | CK Hurley                             |
| <b>B*4042</b>            | —                | —                    | 2000-350-252  | AF408164, AF408165   |                                       |
| <b>B*4043</b>            | —                | —                    | BY00040   | AF494281, AF494282   |                                       |
| <b>B*4044</b>            | —                | —                    | GN00417   | AY094136, AY094137   |                                       |
| B*4101                   | B41              | —                    | SGAR, CM4101, BM21  | M24035, U90560, AJ309193   |                                       |
| B*4102                   | B41              | B41.2                | SBD4, GU5175, BM2684  | X81363, U17572, X86704   |                                       |
| B*4103                   | B41 <sup>c</sup> | —                    | GN00182, GN00245  | AF028595, AF028596, AF102561, AF102562                               | A-M Little <sup>b</sup>               |
| B*4104                   | —                | —                    | 99126462S   | AF258782   |                                       |
| B*4105                   | —                | B*4101V              | GN00370   | AF279117, AF279118   |                                       |
| <b>B*4106</b>            | —                | —                    | UC-B434, 09-S-0029#0001                                     | AJ308547, AY033291, AY033292   | (Vidal <i>et al.</i> , 2001), S Grams |
| B*4201                   | B42              | —                    | BB, BJ  | M24034, AJ309194   | A-M Little <sup>b</sup>               |
| B*4202                   | B42              | B42ANDO, 71B         | E-117, E-119, 71B, 31-650, DZA9                             | D50709, U88249, AF017319, U88407, AJ002677                           |                                       |
| <b>B*4204</b>            | —                | —                    | BY0027  | AY050197, AY050198   | CK Hurley                             |
| B*44020101               | B44(12)          | B44.1, B44.2, B44021 | FMB, BAU, RG-BR   | M24038, M15470, AJ309936   | P Dunn <sup>b</sup>                   |
| <b>B*44020102S</b>       | —                | —                    | PIO   | AF384095   | L Gebuhrer                            |
| B*440202                 | B44(12)          | B*4402V              | GN00350   | AF253326, AF253327, AF386759   | D Adorno <sup>b</sup>                 |
| <b>B*440203</b>          | B44(12)          | —                    | 2000-238-831  | AY034810, AY034811   | CK Hurley                             |
| B*440301                 | B44(12)          | B44.1New             | PITOUT, F24, MM44031  | X64366, U90561   |                                       |
| B*440302                 | B44(12)          | —                    | OBH, SHCHA, CAUC44032                                       | L42282, U58469, U58470, AF056981                                     |                                       |
| B*4404                   | B44(12)          | B44.4                | TAN, BEB  | X75953, X78426, X78427   |                                       |
| B*4405                   | B44(12)          | B44WJG, B44KB        | WJG, KB, 14-AS-0013#0001                                    | X78849, X78850, L31798, AF288472, AF288473                           |                                       |
| B*4406                   | B44(12)          | —                    | GIJM, KARY  | X83400, X83401-3, L42345   |                                       |
| B*4407                   | B44(12)          | B*44GB               | GB92  | X90391   |                                       |

**Table 3.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity      | Previous equivalents | Individual or cell line from which the sequence was derived | Accession number   | References or submitting author(s)      |
|--------------------------|----------------------|----------------------|---|--|---|
| B*4408                   | B44(12)              | B44bo, B*44DM        | 19662, DM   | U64801, AJ132659, AJ132660   |   |
| B*4409                   | B12                  | B4409                | S.A., RG-BR   | X99734, AJ309937   | P Dunn <sup>b</sup>                     |
| B*4410                   | B44(12) <sup>c</sup> | —                    | S32   | U63559, U63560   |   |
| B*4411                   | —                    | —                    | GN00220   | AF071767, AF071768   |   |
| B*4412                   | B44(12)              | B*4402Var            | MOV002AN  | AJ133267   |   |
| B*4413                   | B44(12)              | B*44New1             | AMI005AN  | AJ131118   |   |
| B*4414                   | B12                  | B44IP                | IP  | AJ238702   |   |
| B*4415                   | B12                  | B45New, B*45V        | ML1805, 3880, SMN44   | AJ133471, AJ133472, AJ251766, AJ251767, AF215918, AF215919                 |   |
| B*4416                   | B47                  | B*4402New            | 10000009  | AF190446, AF190447   |   |
| B*4417                   | B44(12)              | B*44SR               | B1268   | AJ249724, AJ249725   |   |
| B*4418                   | —                    | —                    | 99-2201   | AF190275, AF190276, AF190277   |   |
| B*4419N                  | Null                 | B44N                 | ALBA  | AJ251593   |   |
| B*4420                   | —                    | —                    | GN00331   | AF205534, AF205535   |   |
| B*4421                   | —                    | B*TBAL               | GN00333, TBAL   | AF205538, AF205539, AF231098, AF231099                                     |   |
| B*4422                   | —                    | —                    | 15-S-0032#0102  | AY003906, AY003907   |   |
| B*4423N                  | Null                 | B*44MP               | 12506397, FH33  | AJ278766, AJ295293, AF363681, AF363682, AF363683                           | A Smith <sup>b</sup>                    |
| B*4424                   | —                    | —                    | GN00383   | AF310140, AF310141   |   |
| <b>B*4425</b>            | —                    | B*CB2913             | CB2913  | AF335308, AF335309   | (Kennedy <i>et al.</i> , 2002)          |
| <b>B*4426</b>            | —                    | —                    | MCH48   | AF349440   | (Luo <i>et al.</i> , 2002)              |
| <b>B*4427</b>            | B44(12)              | —                    | E487, FH50, FH48  | AF329843, AF329845, AF419293, AF419294, AF419295                           | (Canossi <i>et al.</i> , 2002), A Smith |
| <b>B*4428</b>            | —                    | —                    | GN00396, GN00397  | AY050199, AY050200, AY050201, AY050202                                     | CK Hurley                               |
| <b>B*4429</b>            | —                    | —                    | GN00406   | AY050212, AY050213   | CK Hurley                               |
| <b>B*4430</b>            | —                    | —                    | 2000-301-424  | AF408158, AF408159   | CK Hurley                               |
| <b>B*4431</b>            | B44(12)              | —                    | AKAR  | AJ297942, AJ297043   | (Przemeck <i>et al.</i> , 2002)         |
| <b>B*4432</b>            | —                    | —                    | VBD25061  | AY057404, AY057405   | BD Tait                                 |
| B*4501                   | B45(12)              | —                    | OMW, CM4501   | X61710, U90562   |   |
| B*4502                   | —                    | —                    | GN00214   | AF061861, AF061862   |   |
| B*4503                   | —                    | B*4501New            | O3499   | AJ275937   |   |
| B*4504                   | —                    | —                    | PMF   | AJ278944   |   |
| <b>B*4505</b>            | —                    | —                    | GN00387   | AY016213, AY016214   | CK Hurley                               |
| <b>B*4506</b>            | —                    | —                    | 013969175   | AF469652, AF469653   | TM Williams                             |
| B*4601                   | B46                  | —                    | T7527, THAI742, T7526                                       | M24033, AJ310508   | A-M Little <sup>b</sup>                 |
| B*4602                   | B46                  | B46V1                | JCB15113  | AB032091   |   |
| B*47010101               | B47                  | —                    | PLH   | M19756, AJ295141   | A-M Little <sup>b</sup>                 |
| <b>B*47010102</b>        | B47                  | —                    | 383008  | AJ308398   | A-M Little                              |
| B*4702                   | B47 <sup>c</sup>     | —                    | CAL   | Y091118  |   |
| B*4703                   | —                    | B*47RG, B*47TAIB     | DT-32, 29182, TAIB, GN00218, VELT                           | AF016842, AF016843, Y17193, Y19194, AJ006978, AF071763, AF071764, AJ251003 |   |
| <b>B*4704</b>            | —                    | —                    | 05-S-0012#1001  | AY033293, AY033294   | (Grams <i>et al.</i> , 2002)            |
| B*4801                   | B48                  | —                    | KRC103, HS67, CM4801, 26/27                                 | M84380, U66250, AJ309139   | A-M Little <sup>b</sup>                 |

**Table 3.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity     | Previous equivalents  | Individual or cell line from which the sequence was derived   | Accession number   | References or submitting author(s) |
|--------------------------|---------------------|-----------------------|---|--|------------------------------------|
| B*4802                   | B48                 | —                     | AUCA#18   | L20089   |                                    |
| B*4803                   | B48 <sup>c</sup>    | B-48.3                | TOB-115   | L76931   |                                    |
| B*4804                   | B48                 | 0328                  | 0328, JC20008   | AF017328, AF017329, AB063626, AB063627, AB063628   | T Noda <sup>b</sup>                |
| B*4805                   | B48                 | B*40Var               | GLAD, 011837630/48  | AF096631, AF096632, AF127805, AF129293, AF132490   |                                    |
| B*4806                   | —                   | B*4801Variant         | 234-01069   | AF108426, AF108427   |                                    |
| B*4807                   | B48                 | B*4801Var             | 30007, GN00258  | AF136393, AF136394, AF135538, AF135539   |                                    |
| B*4901                   | B49(21)             | —                     | AM, GU2092  | M24037, U11263, AJ311600   | A-M Little <sup>b</sup>            |
| B*4902                   | B49(21)             | B*4901V               | MC2918, GN00358   | AJ269496, AJ269497, AJ269498, AF262958, AF262959   |                                    |
| B*4903                   | —                   | B*RA                  | 29037   | AJ288980   |                                    |
| B*5001                   | B50(21)             | —                     | SH.JO, JD, GU2037   | X61706, U11261   |                                    |
| B*5002                   | B45(12)             | B*50IM, B*45v, B*45ZJ | IMM754, WM1366C, CTM-1983039, GN00173, UBM13129406            | U58317, U58318, Y08995, AF006634 AF008926, AF008927, Y14205  |                                    |
| B*5004                   | B50(21)             | —                     | 3011  | AF136397, AF136398   |                                    |
| B*510101                 | B51(5)              | —                     | LKT-2, TO, BM92, CD, LCL721, KRC110, KRC005, BA1, BA6         | M32319, M22786, M22787-M22788, M28205, Z46808, L47985  |                                    |
| B*510102                 | B51(5)              | B*51V                 | GN00106, 12WDCH010, 12WDCH028, UCB-1999-163                   | U52169, U52170, U90611, U90612, U90613, U90614, AJ278903   |                                    |
| B*510103                 | B51(5)              | B*51011V              | GN00264   | AF135550, AF135551   |                                    |
| B*510104                 | B51(5)              | —                     | DLM   | AJ249937, AJ249938   |                                    |
| <b>B*510105</b>          | B51(5)              | —                     | MS22035   | AJ426462, AJ426465, AJ426466, AJ426463, AJ426464   | EM van den Berg-Loonen             |
| B*510201                 | B5102               | B5.35                 | UM, 02627   | M68964   |                                    |
| B*510202                 | B5102               | —                     | MY823, 12WDCH011  | L41925, U90615, U90616   |                                    |
| B*5103                   | B5103               | BTA                   | 30-BY3  | M80670   |                                    |
| B*5104                   | B51(5)              | —                     | GRC150  | Z15143   |                                    |
| B*5105                   | B51(5)              | B51v                  | LK, 10030381  | U06697, AJ297934   |                                    |
| B*5106                   | B51(5) <sup>c</sup> | —                     | GN097, GN088  | U31334, U32661   |                                    |
| B*5107                   | B51(5)              | B5101v                | RCE55   | X94481   |                                    |
| B*5108                   | B51(5)              | B*51FA, B*51GAC       | F.A., GN00109, NDS-DG, AS7235                                 | X96473, U52815, U52816, Y08994, Y10031, Y11228, Y11229   |                                    |
| B*5109                   | B51(5)              | B*51IM, B*51N         | IMM721, NMDP-0004, RN285B, GN00178, GN00205, GN00204, NM4B437 | U58319, U58320, U76400, U76401, AF002272, AF017320, AF028599, AF028600, AF054001, AF054002, AF165848, AF165849 |                                    |
| B*5110                   | —                   | HLA-B*51like, B-51v   | KUNA 14, 009041674  | AF004370, AF056479, AF056480   |                                    |
| B*5111N                  | Null                | B*51N                 | HGW6178   | Y13566   |                                    |
| B*5112                   | —                   | B51Va                 | RTCV  | AF023442, AF023443   |                                    |
| B*511301                 | —                   | B*51vK60              | K60   | AJ002151   |                                    |
| B*511302                 | —                   | B*51011V              | GN00140   | AF135534, AF135535   |                                    |
| B*5114                   | —                   | —                     | GN00207, GN00208  | AF054005, AF054006, AF054007, AF054008   |                                    |
| B*5115                   | —                   | —                     | GN00183   | AF072445, AF072446   |                                    |

**Table 3.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity      | Previous equivalents | Individual or cell line from which the sequence was derived | Accession number                                 | References or submitting author(s) |
|--------------------------|----------------------|----------------------|---|--|------------------------------------|
| B*5116                   | B52(5)               | DT51v                | DTEC  | AF098264, AF098265                               |                                    |
| B*5117                   | B51(5)               | —                    | 3010  | AF136395, AF136396                               |                                    |
| B*5118                   | B51(5)               | B*51New              | MEFG  | AJ133773, AJ133814                               |                                    |
| B*5119                   | —                    | —                    | TN01/1210   | AJ238971, AJ238972                               |                                    |
| B*5120                   | —                    | B*5108V              | GN00285   | AF140861, AF140862                               |                                    |
| B*5121                   | —                    | B*51011V             | GN291   | AF176079, AF176080                               |                                    |
| B*5122                   | —                    | B*51011V             | GN00349, GN00355  | AF248061, AF248062, AF260975, AF260976           |                                    |
| B*5123                   | —                    | B*5102V              | GN00342   | AF226844, AF226845                               |                                    |
| B*5124                   | B51(5)               | B*51New              | 46643   | AJ276995   |                                    |
| <b>B*5126</b>            | —                    | —                    | GN00385   | AY016209, AY016210                               | (Steiner <i>et al.</i> , 2001b)    |
| <b>B*5127N</b>           | —                    | —                    | 5761  | AF363789, AF363790                               | M Kamoun                           |
| <b>B*5128</b>            | B51(5)               | —                    | VTIS40888   | AY057400, AY057401                               | BD Tait                            |
| <b>B*5129</b>            | B51(5)               | —                    | FH59, FH38  | AY056451, AY056452, AY056453                     | A Smith                            |
| B*520101                 | B52(5)               | —                    | MT, LK707, E4181324   | M22793-9, AJ420240                               | A-M Little <sup>b</sup>            |
| B*520102                 | B52(5)               | —                    | AUCA#2, TOB-137, BA8  | L20090, L76091, L47984                           |                                    |
| B*520103                 | B52(5)               | B*52011V             | GN00339   | AF226838, AF226839                               |                                    |
| B*5202                   | —                    | B*52012V             | GN00314   | AF181844, AF181845                               |                                    |
| B*5203                   | —                    | B*52012V             | GN00365   | AF281152, AF281153                               |                                    |
| <b>B*5204</b>            | B52(5)               | —                    | MS23477   | AJ316288, AJ426470, AJ426467, AJ417684, AJ417673 | EM van den Berg-Loonen             |
| B*5301                   | B53                  | —                    | AMAI, AM, 046   | M58636, U90566, AJ311599                         | A-M Little <sup>b</sup>            |
| B*5302                   | —                    | —                    | S15(28)   | U63561, U63562                                   |                                    |
| B*5303                   | —                    | —                    | GN00231   | AF071769, AF071770                               |                                    |
| B*5304                   | —                    | B*CD                 | CD-ARCBS  | AF117772, AF117773                               |                                    |
| B*5305                   | —                    | B*5301V              | GN00325, 24961vtis  | AF198652, AF198653, AF304002, AF304003           |                                    |
| B*5306                   | —                    | B*51/53New           | SIA   | AJ276996   |                                    |
| B*5307                   | B53                  | B*53/37              | 49716   | AJ293856, AJ293857                               |                                    |
| <b>B*5308</b>            | —                    | —                    | 2000-077-189  | AY034802, AY034803                               | CK Hurley                          |
| <b>B*5309</b>            | —                    | —                    | BY0023  | AY050191, AY050192                               | CK Hurley                          |
| B*5401                   | B54(22)              | —                    | LKT-3, TTL  | M77774   |                                    |
| B*5402                   | B54(22)              | B5401V1              | JCBB18561   | AB032095   |                                    |
| B*5501                   | B55(22)              | —                    | VEN   | M77778, AJ310509                                 | A-M Little <sup>b</sup>            |
| B*5502                   | B55(22)              | —                    | APA   | M77777   |                                    |
| B*5503                   | B55(22) <sup>c</sup> | B5501v               | RCE70   | X94482   |                                    |
| B*5504                   | B55(22)              | B-4201v, B55.2       | TAGO, 11840Kane, KIW  | L76225, D85761, D89333, D89334                   |                                    |
| B*5505                   | B22                  | B5501, W669R         | B55W669R  | U63653   |                                    |
| B*5507                   | B54(22)              | —                    | 8138, 9070  | AF042289, AF042290                               |                                    |
| B*5508                   | B56(22)              | B*ER                 | DIA2 98629, VTIS31300                                       | AF091343, AF091344, AF304004, AF304005           |                                    |
| B*5509                   | —                    | S-PB55               | 13215   | AJ250628, AJ250629                               |                                    |
| B*5510                   | B55(22)              | B5502V1, B55v        | JCBB1366, BY0028  | AB032094, AF408166, AF408167                     | CK Hurley <sup>b</sup>             |
| <b>B*5511</b>            | —                    | —                    | 2000-259-501  | AY042674, AY042675                               | CK Hurley                          |
| <b>B*5512</b>            | —                    | —                    | 10002057  | AJ420106   | A-M Little                         |
| B*5601                   | B56(22)              | —                    | VOO   | M77776   |                                    |

**Table 3.** Continued

| HLA alleles <sup>a</sup> | HLA specificity | Previous equivalents    | Individual or cell line from which the sequence was derived | Accession number   | References or submitting author(s)               |
|--------------------------|-----------------|-------------------------|---|--|--|
| B*5602                   | B56(22)         | —                       | ENA   | M77775   |  |
| B*5603                   | B22             | B22N, B56/46            | 15630Naka, 01300, 01094, NPC-4                              | D85762, U67746, U67747, U67749, U73113                     |  |
| B*5604                   | B56(22)         | B*5602Var               | 5227, 5274  | U93911, U93912, U93913, U93914                             |  |
| B*5605                   | B56(22)         | B56v                    | 234-1047, CBC11028  | AF072767, AF072768, AB030574                               |  |
| B*5606                   | —               | B*7801New, ?B78         | 20598, AFM  | Y18542, Y18543, AJ276993                                   |  |
| B*5607                   | B56(22)         | B*New B56-Bw4           | 20193, VTIS45561  | Y18544, Y18545, AF387903, AF387904                         |  |
| <b>B*5608</b>            | —               | —                       | 1PF6  | AY045733, AY045734   |  |
| B*570101                 | B57(17)         | —                       | WIN, MOC, MOLT4   | X55711, M32318   |  |
| <b>B*570102</b>          | B57(17)         | —                       | GN00398   | AY050203, AY050204   |  |
| B*5702                   | B57(17)         | Bw57.2                  | 32/32   | X61707   |  |
| B*570301                 | B57(17)         | B*57SAU                 | SAU, MAME, GB32   | U18790, U39088, Y09157                                     |  |
| B*570302                 | B57(17)         | B*57New                 | E187  | AF279663   |  |
| B*5704                   | B57(17)         | B-5702v                 | OPOU  | L76096   |  |
| B*5705                   | —               | —                       | GN00213   | AF061859, AF061860   |  |
| B*5706                   | —               | B*57New                 | CTM2988653  | AF130734   |  |
| B*5707                   | —               | —                       | GN00327   | AF202449, AF202450   |  |
| <b>B*5708</b>            | B57(17)         | —                       | 35980   | AJ409214   | M Guttridge                                      |
| <b>B*5709</b>            | —               | —                       | 2000-245-285  | AY034804, AY034805   | CK Hurley  |
| B*5801                   | B58(17)         | —                       | WT49, DAUDI, GN00107, 1075011, HGN, KBM                     | M11799, U52813, U52814, U65395, U65396, AB008102, AJ420241 | A-M Little <sup>b</sup>                          |
| B*5802                   | B58(17)         | B58v                    | DAUDI, RCE56, CR-30609                                      | L33923, X86703, AJ133780, AJ133781                         |  |
| B*5804                   | —               | —                       | 99-2199   | AF189245, AF189246, AF189247                               |  |
| B*5805                   | —               | B*5801V                 | GN00322   | AF201474, AF201475   |  |
| B*5806                   | —               | B*5802V                 | GN003714  | AF288046   |  |
| B*5901                   | B59             | —                       | AT, KY, MAS   | L07743, D50300   |  |
| B*670101                 | B67             | —                       | HS67, #591, #W7079, PVR                                     | L17005, L76252   |  |
| B*670102                 | B67             | B*67LAV                 | LAV   | U18789   |  |
| B*6702                   | —               | —                       | BY00014, BY0026, JH66203                                    | AF321834, AF321835, AY050195, AY050196, AF487379           | CK Hurley <sup>b</sup> , MS Leffell <sup>b</sup> |
| B*7301                   | B73             | —                       | LK707, LE023, HL  | U04787, X77658, L24373, AJ311601                           | A-M Little <sup>b</sup>                          |
| B*7801                   | B78             | B'SNA', Bx1             | SNA, 32/32, Terasaki Ext#69                                 | X61708, M33573, AJ309192                                   | A-M Little <sup>b</sup>                          |
| B*780201                 | B78             | —                       | RC654   | L41214   |  |
| B*780202                 | B78             | B78Hen                  | Hen   | X96534, X96533   |  |
| B*7803                   | —               | —                       | GN00209   | AF061855, AF061856   |  |
| B*7804                   | —               | B*78New                 | COH#1058  | AJ012471, AJ132713, AJ132714                               |  |
| B*7805                   | —               | B52variant              | B5859   | AB051357   |  |
| B*8101                   | B81             | B'DT', B*7x48GB, B56b   | AP630, GB92, 56B  | L37880, X90390, U34810                                     |  |
| B*8201                   | —               | B22x45, B45v, 82new-64B | MAME, MAMA, MAPA, RB22, VWAR, 64B                           | U29241, U38800, U36492, U43337, AF017321                   |  |
| B*8202                   | —               | B*8201New               | CEK008AN, VTIS68967   | AJ251755, AF525409, AF525410                               |  |
| B*8301                   | —               | B*5603V                 | GN00298, GN00298  | AF176083, AF176084, AF275748, AF275749                     | BD Tait <sup>b</sup>                             |

<sup>a</sup> Allele names given in bold type have been assigned since the 2000 Nomenclature report.<sup>b</sup> This reference is to a confirmatory sequence.<sup>c</sup> HLA specificity provided from the HLA dictionary (Hurley *et al.*, 1997; Schreuder *et al.*, 1999).

**Table 4.** Designations of HLA-C, -E, -F, -G alleles

| HLA alleles <sup>a</sup> | HLA specificity  | Previous equivalents | Individual or cell line from which the sequence was derived    | Accession number   | References or submitting author(s) |
|--------------------------|------------------|----------------------|--|--|------------------------------------|
| Cw*0102                  | Cw1              | Cw1.2, C1J1          | T7527, AP, LCL721, KRC005, TTY, BRUG, LCL721                   | M84171, Z46809, D50852, M16272, AJ420242   | A-M Little <sup>b</sup>            |
| Cw*0103                  | Cw1              | C1J2                 | ITOU   | D64145   |                                    |
| Cw*0104                  | —                | Cw*01/12             | J.V.   | AJ133100   |                                    |
| <b>Cw*0105</b>           | —                | Cw*01variant         | 607990   | AJ300765, AJ300766   | (Bengtsson <i>et al.</i> , 2002a)  |
| <b>Cw*0106</b>           | —                | —                    | SWC231   | AJ418708, AJ418709   | (Wu <i>et al.</i> , 2002c)         |
| <b>Cw*0107</b>           | —                | —                    | VTIS67160  | AF525405, AF525406   | BD Tait                            |
| Cw*020201                | Cw2              | Cw2.2                | MVL  | M24030   |                                    |
| Cw*020202                | Cw2              | Cw2.2                | SWEIG, BDG, BRUG, SWEIG007                                     | M26712, D83029, M16273, AJ420243   | A-M Little <sup>b</sup>            |
| Cw*020203                | Cw2              | —                    | KACD   | Z72007   |                                    |
| Cw*020204                | Cw2              | Cw2.4                | HEL299, NM155, NM233, NM239, NM303, NM366, NM72, MAN527, 19215 | U88838, U88839, U97346, U97347, Z96924, AJ011881, Y18660, Y18661, Y18144, Y18145 |                                    |
| <b>Cw*020205</b>         | —                | —                    | 1177   | AY028705, AY028706   | M Bunce                            |
| Cw*0203                  | —                | —                    | NM3340   | AF037449, AF037450   |                                    |
| Cw*0204                  | —                | —                    | PRC32  | AF281055, AF281056   |                                    |
| <b>Cw*0205</b>           | —                | —                    | 1206   | AY028707, AY028708   | M Bunce                            |
| Cw*030201                | Cw10(w3)         | —                    | AP, JG   | M84172, AJ011884   |                                    |
| <b>Cw*030202</b>         | Cw10(w3)         | —                    | DAUDI  | AJ318865   | A-M Little                         |
| Cw*030301                | Cw9(w3)          | C3J1                 | GRC150, SJK  | M99390, D50853   |                                    |
| Cw*030302                | Cw9(w3)          | —                    | NM2688, NM3499   | AF036554, AF036555   |                                    |
| Cw*030303                | Cw9(w3)          | —                    | TER#1054   | AJ298837   |                                    |
| Cw*030401                | Cw10(w3)         | C3J2                 | KRC110, JD, SKA, JG  | M99389, D64150, U44064, U31372, U31373   |                                    |
| Cw*030402                | Cw10(w3)         | —                    | NM233, NM303, NM366, ML1805                                    | U97344, U97345, AJ133473, AJ133474   |                                    |
| Cw*0305                  | —                | MA083C, Cw*03MAC     | MA083C, NM3214, NM3222, PAM                                    | AF016303, AF009683, AJ005199   |                                    |
| Cw*0306                  | —                | —                    | NM133, NM627, NM2203, NM2415, NM2616                           | AF003283, AF003284   |                                    |
| Cw*0307                  | Cw3              | —                    | CTM-7980718  | AF039198   |                                    |
| Cw*0308                  | —                | —                    | NM1931, TER0171  | AF037074, AF037075, Y16411, Y16412, Y18656, Y16411, Y16412, Y18142, Y18143       |                                    |
| Cw*0309                  | Cw3 <sup>e</sup> | —                    | NM4305   | AF037076, AF037077   |                                    |
| Cw*0310                  | Cw3              | Cw*03041New          | NM4C187, DKM   | AF138276, AF138277, AF147701, AF147702   |                                    |
| Cw*0311                  | —                | Cw*03xx              | NMDP0187-1868-4  | AF145466, AF145467   |                                    |
| Cw*0312                  | —                | —                    | UCLA022679917  | AF172867, AF172868   |                                    |
| <b>Cw*0313</b>           | —                | Cw*03031var          | 10050195   | AJ298116   | (Cox <i>et al.</i> , 2002a)        |
| <b>Cw*0314</b>           | —                | Cw*KCULL             | KCULL  | AF335314, AF335315   | H Dunckley                         |
| <b>Cw*0315</b>           | —                | —                    | N322   | AY078078, AY078079   | S Chapple                          |
| Cw*04010101              | Cw4              | C4J1, BeWo C.1       | C1R, KSE, BeWo, CJO-A  | M84386, X58536, D83030, AJ238694, AJ292559, M26432                               |                                    |
| Cw*04010102              | —                | —                    | Tersaki EXT40  | AJ278494   |                                    |
| Cw*040102                | Cw4              | Cw*04N               | RN1238C  | AF002271, AF017322   |                                    |
| Cw*0403                  | —                | Cw4NM, Cw4x6         | KW0010   | L54059   |                                    |
| Cw*0404                  | —                | rn126C, Cw*0401new   | rn126C, NM157, NM187   | U88251, AF017323, U96786, U96787   |                                    |
| Cw*0405                  | —                | Cw*0401New           | NM2602   | AF036556, AF036557   |                                    |

**Table 4.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity | Previous equivalents | Individual or cell line from which the sequence was derived | Accession number   | References or submitting author(s)    |
|--------------------------|-----------------|----------------------|---|--|---------------------------------------|
| Cw*0406                  | —               | TREC1, Cw4x6         | DM4, MP3  | AF062587, AF062588, AF076476                               |                                       |
| Cw*0407                  | —               | Cw*0401 Variant      | ML1805  | AJ133475, AJ133476   |                                       |
| Cw*0408                  | —               | Cw*04new             | NMDP-0196-1628-3  | AF284582, AF284583   |                                       |
| <b>Cw*0409N</b>          | Null            | Cw4New               | CTM6991383, LCL13W09501                                     | AF196489, AF405691   | (Balas <i>et al.</i> , 2002), ZC Wang |
| <b>Cw*0410</b>           | Cw4             | —                    | VTIS64141   | AF525407, AF525408   | BD Tait                               |
| Cw*0501                  | Cw5             | Cw5N                 | QBL, RC, JME, QBL, LB129-SCLC                               | M58630, L24491, D64148, D83742, AJ010748, Y18146, AJ420244 | A-M Little <sup>b</sup>               |
| Cw*0502                  | Cw5             | Cw5New               | CTM-5957411   | AF047366, AF047367   |                                       |
| Cw*0503                  | —               | Cw*05DZ              | BB90-MEL  | AF168611   |                                       |
| Cw*0504                  | —               | Cw5New               | CTM-4990904   | AF173007, AF173008   |                                       |
| <b>Cw*0505</b>           | —               | —                    | 609648  | AJ440717, AJ440718   | M Bengtsson                           |
| Cw*0602                  | Cw6             | Cw6(W), C6J1         | MS, G088, DJS, JOE, JD, TTU                                 | M28206, X70857, Z22752-4, M28160, D64147                   |                                       |
| Cw*0603                  | —               | —                    | NM779   | AF019567, AF019568   |                                       |
| Cw*0604                  | —               | Cw6V                 | MA43, MA95  | AB008136   |                                       |
| Cw*0605                  | Cw6             | Cw*06NF              | NF  | AF105240, AF105241   |                                       |
| Cw*0606                  | —               | —                    | 675/99  | AJ277100, AJ277101, AJ277102, AJ277103                     |                                       |
| Cw*0607                  | —               | Cw*06DKM             | DEDKM   | AJ293511   |                                       |
| Cw*070101                | Cw7             | —                    | MF, LCL721  | M28207, Z46810, Y16418                                     |                                       |
| Cw*070102                | Cw7             | Cw*07New             | 19323   | Y18499, Y18533, Y18534, Y18535, Y18536                     |                                       |
| Cw*07020101              | Cw7             | JY328, Cw7J1, Cw7.5  | JY, TID, KOK, WEHO  | D38526, Z49112, AJ293016                                   |                                       |
| Cw*07020102              | Cw7             | —                    | Terasaki EXT48  | AJ293017   |                                       |
| Cw*0703                  | —               | HLA-4                | ?   | M11886   |                                       |
| Cw*070401                | Cw7             | Cw7/8v               | LB33-MEL, KRO3/4, SSA, 40C, 10050195                        | U09853, X83394, D49552, U38976, AJ291815                   | A-M Little <sup>b</sup>               |
| <b>Cw*070402</b>         | Cw7             | —                    | NDS-HM  | AF220290, AF220291, AY064404                               | M Bunce                               |
| Cw*0705                  | —               | 39C                  | 39C   | U38975   |                                       |
| Cw*0706                  | Cw7             | Cw*07GB              | GB92  | X97321   |                                       |
| Cw*0707                  | —               | Cw7v                 | HAUP  | Z79751   |                                       |
| Cw*0708                  | —               | RN2157C              | RN2157C   | AF017330, AF017331   |                                       |
| Cw*0709                  | —               | —                    | NM388   | AF015556, AF015557   |                                       |
| Cw*0710                  | —               | —                    | NM1279  | AF038573, AF038574   |                                       |
| Cw*0711                  | —               | Cw*0704x             | LB129-SCLC  | AJ010749   |                                       |
| Cw*0712                  | —               | Cw-0704 N            | TER#877, TER#878, TER#857                                   | U60217, U60218   |                                       |
| Cw*0713                  | —               | Cw*JFOR              | JFOR, PFOR  | AF144664, AF144665   |                                       |
| Cw*0714                  | Cw7             | —                    | 14783D3   | AJ242661   |                                       |
| <b>Cw*0715</b>           | —               | —                    | 500900  | AF316035, AF316036   | TM Williams                           |
| <b>Cw*0716</b>           | —               | —                    | NY00000850  | AF480614   | F Garcia Sanchez                      |
| Cw*080101                | Cw8             | C8J1                 | 02627, KNM, SFK, HTS, 26/27                                 | M84174, D64151, AJ420246                                   | A-M Little <sup>b</sup>               |
| <b>Cw*080102</b>         | Cw8             | —                    | SWN8, PU03  | AJ438882, AJ438883, AF510721                               | (Wu <i>et al.</i> , 2002b), M Lin-Chu |
| Cw*0802                  | Cw8             | —                    | CGM1, LWAGS, WT51   | M59865, M84173   |                                       |
| Cw*0803                  | Cw8             | C8J2                 | KRC103, SSK   | Z15144, D50854   |                                       |

**Table 4.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity  | Previous equivalents         | Individual or cell line from which the sequence was derived | Accession number   | References or submitting author(s) |
|--------------------------|------------------|------------------------------|---|--|------------------------------------|
| Cw*0804                  | Cw8 <sup>c</sup> | —                            | NM313, NM914, C03, TER#876                                  | U96784, U96785, AF016304, AF009684, U60321, U60322   |                                    |
| Cw*0805                  | —                | Cw*08Var                     | NEQ2A10/97  | Y15842   |                                    |
| Cw*0806                  | —                | —                            | EC22  | AF082800, AF082801   |                                    |
| Cw*0807                  | —                | Cw*CCAI                      | CCAI  | AF179631, AF179632   |                                    |
| Cw*0808                  | —                | Cw*0801V                     | CSR   | AF245437   |                                    |
| Cw*0809                  | —                | —                            | Kolla 34  | AJ278509   |                                    |
| Cw*120201                | —                | Cb-2                         | MT  | M28172   |                                    |
| Cw*120202                | —                | Cw*1202gyp, C12J1            | G085, MSU, AKIBA, E4181324                                  | X70856, D64152, D83741, M21963, D12471, D12472, AJ420247   | A-M Little <sup>b</sup>            |
| Cw*120203                | —                | Cw*PBAG                      | PBAG  | AF189725, AF189726   |                                    |
| Cw*120301                | —                | Cw12New, C12J12              | D0208915, WDV, YAR, GB002, HNT, JBUSH                       | U06695, U06696, X82122, D64146, AJ420248   | A-M Little <sup>b</sup>            |
| Cw*120302                | —                | —                            | PI151   | AF289031   |                                    |
| Cw*120401                | —                | Sy/9-2                       | M.H(9-2)  | X99704   |                                    |
| Cw*120402                | —                | Cw*12JD,                     | NDS-JD, NM2018  | Y11843, AF015558, AF015559   |                                    |
| Cw*1205                  | —                | Cw12x16                      | ANDP  | Z80228, Z83247   |                                    |
| Cw*1206                  | —                | —                            | NM1699  | AF036552, AF036553   |                                    |
| Cw*1207                  | —                | —                            | Atuwagu, Atuwaogu   | AJ249163, AJ249164   |                                    |
| <b>Cw*1208</b>           | —                | Cw*12new                     | 10030006  | AJ304496   | (Cox <i>et al.</i> , 2002a)        |
| Cw*140201                | —                | —                            | LUY, TC106, LKT2  | U06487, Z47377, U41386, D49820, M28171   |                                    |
| Cw*140202                | —                | —                            | NM1991  | AF015554, AF015555   |                                    |
| Cw*1403                  | —                | Cx44                         | TID, DK1  | D31817, AJ420249   | A-M Little <sup>b</sup>            |
| Cw*1404                  | —                | —                            | CTM-1986765   | AF104218, AF104219   |                                    |
| <b>Cw*1405</b>           | —                | Cw*1402v                     | NMDP0121-0146-5   | AJ306617, AJ306618   | (Bengtsson <i>et al.</i> , 2002a)  |
| Cw*150201                | —                | C*X, Cw*6.2, Cl.9,<br>Cw15J1 | AUCA#2, G085, G088, KUE, GM637, BOB                         | L20091, X67818, D83031, M24096, AJ420250   | A-M Little <sup>b</sup>            |
| Cw*150202                | —                | Cw*1502new                   | NM4C376   | AF139727, AF139728   |                                    |
| Cw*1503                  | —                | —                            | GRC150  | M99388   |                                    |
| Cw*1504                  | —                | Cw*15Sp                      | C047  | X73518   |                                    |
| Cw*150501                | —                | Cw*15v                       | LE023   | X78343   |                                    |
| Cw*150502                | —                | Cw*1505v                     | L7901   | X87841   |                                    |
| Cw*1506                  | —                | Cw*15N                       | M001C, NM2732, JF   | AF002270, AF017324, AF036550,<br>AF036551, Y15745, Y15746, AJ011882,<br>Y15746, Y15745, Y18140, Y18141 |                                    |
| Cw*1507                  | —                | —                            | PUSPAN  | Y17064, Y17065   |                                    |
| Cw*1508                  | —                | Cw*15P                       | Peru-15   | AJ010322, AJ010323   |                                    |
| Cw*1509                  | —                | Cw*1504New                   | NM4C159   | AF165850, AF165851   |                                    |
| Cw*1510                  | —                | —                            | SLGJ  | AF302133, AF302134   |                                    |
| <b>Cw*1511</b>           | —                | Cw*KDILL                     | CBM2598   | AF335316, AF335317   | H Dunckley                         |
| Cw*1601                  | —                | Cl.10                        | GM637, TC106, PITOUT  | M24097, U41420, U56259, U56260, AJ420251   | A-M Little <sup>b</sup>            |
| Cw*1602                  | —                | Cw*16v                       | C073  | X76189   |                                    |

**Table 4.** *Continued*

| HLA alleles <sup>a</sup> | HLA specificity | Previous equivalents     | Individual or cell line from which the sequence was derived | Accession number   | References or submitting author(s) |
|--------------------------|-----------------|--------------------------|---|--|------------------------------------|
| Cw*160401                | —               | rn183C, wt30L            | BOJ, rn183C, wt30C, NM290, NM633, 4136                      | Z75172, U88252, AF017326, U88253, AF017325, U96788, U96789, AJ011883, Y18657, Y18658, Y18659, Y18139 |                                    |
| Cw* 1701                 | —               | Cw16New                  | RSH, GB86, BM21   | U06835, X98742, Y10520, AJ420252   | A-M Little <sup>b</sup>            |
| Cw* 1702                 | —               | Cw17N                    | KSU   | D64149   |                                    |
| Cw* 1703                 | —               | Cw*17New                 | 17767   | Y18537, Y18538, Y18539, Y18540, Y18541   |                                    |
| Cw* 1801                 | —               | Cw*04GB, Cw4x6           | GB92, DIJL, TERASAKI926                                     | X96582, Z80227, AJ420253   | A-M Little <sup>b</sup>            |
| Cw* 1802                 | —               | Cw*18GB                  | GB32  | Y09156   |                                    |
| E*0101                   | —               | JTW15                    | JT, YN, HF, SPAARN70  | M20022, L78934   |                                    |
| E*0102                   | —               | HLA-6.2                  | LCL721  | M21533   |                                    |
| E*010301                 | —               | M32507, E*01C230         | MT, MH, TK, SPAARN70, CHI009, JFE, CR                       | M32507, L78455, X87678, X87679, L78455, AJ002533, AJ002534   |                                    |
| E*010302                 | —               | E*01T230                 | MSC, CHI004, 17771  | X87680, X87681, L79943   |                                    |
| E*010303                 | —               | —                        | CD  | AJ293263   |                                    |
| E*0104                   | —               | M32508                   | KS  | M32508   |                                    |
| F*0101                   | —               | HLA-5.4                  | LCL721.144  | X17093   |                                    |
| G*010101                 | —               | HLA-6.0, G*I, GCO1       | LCL721.144, ASR53, MOU, SPO010, YRK, HT68                   | J03027, X17273, L27836, L27837, D77998, D77999, D78000, U76216, U76217                               |                                    |
| G*010102                 | —               | BeWo G7, G*II, GJ2, GCO2 | BeWo, COX, DHIF, WT47, STK, HT43, TB250                     | M32800, X60983, L07784, L41392, D85032, D67009, D67010, D67011, U65245, U65246, U88244               |                                    |
| G*010103                 | —               | G*IV, GJ4, GCO5          | BeWo, KKH, HT147  | L07784, L20777, L41363, D67003-5, D85033, U65235, U65236   |                                    |
| G*010104                 | —               | G*0101d, GCO4            | HT180   | U65233, U65234   |                                    |
| G*010105                 | —               | CEPH G1                  | 1305  | U58024   |                                    |
| G*010106                 | —               | CEPH G5                  | 2702  | U58027   |                                    |
| G*010107                 | —               | CEPH G6                  | 3101  | U58028   |                                    |
| G*010108                 | —               | CEPH G7                  | 3102  | U58029   |                                    |
| G*0102                   | —               | Ice 6.23-5.4H            | ICE 6   | S69897   |                                    |
| G*0103                   | —               | G*III, GCO9              | LWAGS, HT59   | L20777, U65241, U65242   |                                    |
| G*010401                 | —               | GJ3, GCO7                | KMR, CHI525, HT98, 1302                                     | D67006, D67007, D67008, L78072, U65237, U65238, U58025   |                                    |
| G*010402                 | —               | CEPH G2                  |   |  |                                    |
| G*010402                 | —               | CEPH G3                  | 2701  | U58094   |                                    |
| G*010403                 | —               | CEPH G4                  | 2701  | U58026   |                                    |
| G*0105N                  | —               | G*1.5                    | DCHO27  | L78073   |                                    |
| G*0106                   | —               | —                        | 050900cA537   | AF312697   |                                    |

<sup>a</sup> Allele names given in bold type have been assigned since the 2000 Nomenclature report.<sup>b</sup> This reference is to a confirmatory sequence.° HLA specificity provided from the HLA dictionary (Hurley *et al.*, 1997; Schreuder *et al.*, 1999).

**Table 5.** Designations of HLA-DR alleles

| HLA alleles <sup>a</sup> | HLA-DR serological specificities | HLA-D-associated (T-cell-defined) specificities | Previous equivalents           | Individual or cell line from which the sequence was derived                             | Accession number                              | References or submitting author(s)      |
|--------------------------|----------------------------------|---|--------------------------------|---|---|---|
| DRA*0101                 | —                                | —   | DR $\alpha$ , PDR- $\alpha$ -2 | JY, RAJI, FG.   | J00194, J00196, J00203                        |   |
| DRA*010201               | —                                | —   | DR-H                           | JY  | J00201, AF481359                              | (Kralovicova et al., 2002) <sup>b</sup> |
| <b>DRA*010202</b>        | —                                | —   | —                              | HSF7  | Z84814  | S Williams                              |
| DRB1*010101              | DR1                              | Dw1   | —                              | 45.1, LG2, JSA, DRH, CHG<br>9380965   | X03069, M11161, AF029288                      |   |
| <b>DRB1*010102</b>       | —                                | —   | —                              |   | AF479570                                      | J Wu                                    |
| DRB1*010201              | DR1                              | Dw20  | DR1-NASC                       | NASC, 1568, MUM   | AF029293                                      |   |
| DRB1*010202              | DR1                              | Dw20  | DRB1*01DMT                     | TO0973  | Z50871  |   |
| DRB1*0103                | DR103                            | Dw'BON'   | DR1-CETUS, DRB1*BON            | RAI, BG, BON  | M33600  |   |
| DRB1*0104                | DR1                              | —   | DRB1*01New                     | L.R., LAUTH J   | X70261, X99896                                |   |
| DRB1*0105                | —                                | —   | DRB1*0101V1                    | JC10218   | AB015184                                      |   |
| DRB1*0106                | —                                | —   | —                              | MGM14106  | AJ089723                                      |   |
| DRB1*0107                | —                                | —   | DRB1*New                       | ZAE, IOL Gae, IOL Ire   | AJ276206, AJ303118                            |   |
| <b>DRB1*0108</b>         | —                                | —   | DR1-BCN                        | HSP934010   | AY034875                                      | (Martinez-Gallo et al., 2002)           |
| DRB1*030101              | DR17(3)                          | Dw3   | dJ93N13                        | RAJI, AVL, WT49, DM24, DM28, DM29,<br>CMCC, HSF7, APR, ALL, MVJ, MUR, U-STH<br>21, M.R. | M17379, X04054, Z84489,<br>AF029265, AF152843 |   |
| DRB1*030102              | DR17(3)                          | Dw3   | DRB1*IMR                       |   | M91807, L07767                                |   |
| DRB1*030201              | DR18(3)                          | Dw'RSH'   | —                              | 2041, 1563, 24A1  | M27689, AF029266                              |   |
| DRB1*030202              | DR18(3)                          | Dw'RSH'   | —                              | GN055, GMONT  | U29342, U82403                                |   |
| DRB1*0303                | DR18(3)                          | —   | —                              | RBL B25   | M81743  |   |
| DRB1*0304                | DR17(3)                          | —   | 03MIT                          | MIT3758, 35919  | X75441, AJ409216                              | M Guttridge <sup>b</sup>                |
| DRB1*030501              | DR17(3)                          | —   | DR3New                         | U-HFI, TTO5607  | L29807, U26557                                |   |
| <b>DRB1*030502</b>       | —                                | —   | —                              | LAHRE   | AF335318                                      | (Greville et al., 2002b)                |
| DRB1*0306                | DR3                              | —   | —                              | JV1094  | X90644  |   |
| DRB1*0307                | DR3 <sup>c</sup>                 | —   | —                              | GN073   | U37433  |   |
| DRB1*0308                | —                                | —   | —                              | GN090   | U47028  |   |
| DRB1*0309                | —                                | —   | —                              | D438  | X93315  |   |
| DRB1*0310                | DR17(3) <sup>c</sup>             | —   | —                              | PMR   | U65585  |   |
| DRB1*0311                | DR17(3) <sup>c</sup>             | —   | —                              | UWE02   | U79028  |   |
| DRB1*0312                | DR3                              | —   | DRB1*03AGC                     | WVN   | Y17274  |   |
| DRB1*0313                | —                                | —   | —                              | DELAT   | AJ012424                                      |   |
| DRB1*0314                | DR3                              | —   | DR'KW'                         | KW  | Y17863  |   |
| DRB1*0315                | —                                | —   | DRB1*0301A                     | DKMS 585607   | AJ237899                                      |   |
| DRB1*0316                | —                                | —   | —                              | 09343336  | AF169240                                      |   |
| DRB1*0317                | —                                | —   | DRB1*13KM                      | SMS202-147-KerHut   | AJ238154                                      |   |
| DRB1*0318                | —                                | —   | DRB1*03XX                      | RSA036575, MSA058812  | AJ279010                                      |   |
| <b>DRB1*0319</b>         | —                                | —   | —                              | GCASS   | AF343002                                      | H Dunckley                              |
| <b>DRB1*0320</b>         | —                                | —   | DRB1*03011var                  | NT0022  | AF352294                                      | CK Hurley                               |
| <b>DRB1*0321</b>         | —                                | —   | —                              | Patient#17839   | AJ297266                                      | (Gagne et al., 2002)                    |
| <b>DRB1*0322</b>         | —                                | —   | —                              | MAWE0816AN  | AJ420288                                      | A-M Little                              |
| <b>DRB1*0323</b>         | —                                | —   | —                              | DNA6060   | AY116505                                      | A Reil                                  |

**Table 5.** *Continued*

| HLA alleles <sup>a</sup> | HLA-DR serological specificities | HLA-D-associated (T-cell-defined) specificities | Previous equivalents   | Individual or cell line from which the sequence was derived | Accession number                         | References or submitting author(s) |
|--------------------------|----------------------------------|---|------------------------|---|--|------------------------------------|
| DRB1*040101              | DR4                              | Dw4   | —                      | WT51, PRIESS, MJ4, BOLETH, LTC                              | K02776, M17381, M20548-50, AF029267      |                                    |
| DRB1*040102              | DR4                              | Dw4   | —                      | MC  | X96851                                   |                                    |
| DRB1*0402                | DR4                              | Dw10  | —                      | FS, DM24, MMCC, LPB, YAR                                    | M15068, AF029268, AJ245881, AJ297586     | SGE Marsh <sup>b</sup>             |
| DRB1*040301              | DR4                              | Dw13  | DR4 Dw13A, 13.1        | SSTO, TAS, NBP  | AF029269                                 |                                    |
| DRB1*040302              | DR4                              | Dw13  | DRB1*SD                | BM1 116040, 32891   | AF112876, AJ295845                       |                                    |
| DRB1*0404                | DR4                              | Dw14  | DR4 Dw14A, 14.1        | BIN40, LS40, DM29, RGR                                      | X02902, M15069, M15073, M15074, AF029270 |                                    |
| DRB1*040501              | DR4                              | Dw15  | —                      | KT3, JML, AHC, CRP, DOS                                     | M15070, L13875, AF029271                 |                                    |
| DRB1*040502              | DR4                              | Dw15  | DRB1*KOM               | KOM   | D50889, D49952                           |                                    |
| <b>DRB1*040503</b>       | DR4                              | —   | DRB1*JVASA             | JVASA   | AF450094                                 | (Greville <i>et al.</i> , 2002a)   |
| <b>DRB1*040504</b>       | —                                | —   | —                      | GN00419   | AY094139                                 | CK Hurley                          |
| DRB1*0406                | DR4                              | Dw'KT2'   | —                      | KT2, 43A3   | AF029272                                 |                                    |
| DRB1*040701              | DR4                              | Dw13  | DR4 Dw13B, 13.2        | JHF, R88, JRR   | M37771, AF029273                         |                                    |
| <b>DRB1*040702</b>       | DR4                              | —   | DRB1*0407var           | NT0019  | AF352291                                 | (Chen <i>et al.</i> , 2002)        |
| DRB1*0408                | DR4                              | Dw14  | DR4-CETUS, Dw14B, 14.2 | M36, RA1, SUDNA0254, RGR                                    | M37770, L78169, AF029274                 |                                    |
| DRB1*0409                | DR4                              | —   | —                      | R80   | M64794                                   |                                    |
| DRB1*0410                | DR4                              | —   | DR4.CB                 | CB, ABCC60, EGR   | M81670, M80192, AF029275                 |                                    |
| DRB1*0411                | DR4                              | —   | DR4.EC                 | EC, HV846, HAA, JMJ   | M81700, M55615, L42143, L79973           |                                    |
| DRB1*0412                | —                                | —   | AB2                    | ABO1078   | M77672                                   |                                    |
| DRB1*0413                | DR4                              | —   | DRB1*LEV               | LEV   | M94460                                   |                                    |
| DRB1*0414                | DR4                              | —   | DR4 Dw10.2             | VK  | X65031                                   |                                    |
| DRB1*0415                | DR4                              | —   | —                      | NIC, HOU  | X68272                                   |                                    |
| DRB1*0416                | DR4                              | —   | DR4-BELF               | BEL5GB  | X70788                                   |                                    |
| DRB1*0417                | DR4                              | —   | DRB1*04SAM             | TOB-0070  | L14481                                   |                                    |
| DRB1*0418                | —                                | —   | DRB1*04.N              | AI7, AI8, 74DR  | X71610, U38974                           |                                    |
| DRB1*0419                | DR4                              | —   | DR4FK                  | FK  | L21985                                   |                                    |
| DRB1*0420                | DR4                              | —   | DRB1*04MC              | AD-7863, BM29/92  | L27217                                   |                                    |
| DRB1*0421                | DR4                              | —   | DR4New                 | SMH   | X80288                                   |                                    |
| DRB1*0422                | DR4                              | —   | DR4New                 | D18002  | U17014                                   |                                    |
| DRB1*0423                | DR4                              | —   | —                      | MAG   | Z68503                                   |                                    |
| DRB1*0424                | DR4                              | —   | DRB1*Mi                | Mi  | Z71541                                   |                                    |
| DRB1*0425                | DR4                              | —   | DRB1*04ISA             | RI, HB  | Y09211                                   |                                    |
| DRB1*0426                | DR4                              | —   | DRB1*04CMT             | T010148   | AJ001252                                 |                                    |
| DRB1*0427                | —                                | —   | —                      | NOR03   | AF030439                                 |                                    |
| DRB1*0428                | DR4                              | —   | DRB1*0405V1            | JC4772  | AB007635                                 |                                    |
| DRB1*0429                | DR4                              | —   | DRB1*0405V2            | JC7616  | AB007636                                 |                                    |
| DRB1*0430                | —                                | —   | DRB1*0405V3            | JC9227  | AB015185                                 |                                    |
| DRB1*0431                | DR4 <sup>c</sup>                 | —   | DRB1*04New             | GE47192   | AJ009755                                 |                                    |
| DRB1*0432                | DR4 <sup>c</sup>                 | —   | DRB1*04-A              | NIE   | Y17273                                   |                                    |

**Table 5.** *Continued*

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| DRB1*0433                | —                                | —   | DRB1*04-7468         | WBD7468   | AF023153  |  |
| DRB1*0434                | —                                | —   | DRB1*04new           | CB1653  | AJ133492  |  |
| DRB1*0435                | —                                | —   | DRB1*04New           | NT0009  | AF242355  |  |
| DRB1*0436                | —                                | —   | —                    | BN61  | AF240637  |  |
| DRB1*0437                | —                                | —   | DRB1*04nv            | MDPH0002764   | AY007565  |  |
| DRB1*0438                | —                                | —   | —                    | SLTA, VTIS72428   | AF235034, AF489510  |  |
| <b>DRB1*0439</b>         | —                                | —   | DRB1*04031var        | NT0024  | AF352296  | M Varney <sup>b</sup>                    |
| <b>DRB1*0440</b>         | —                                | —   | DRB1*0404var         | NT0020  | AF352292  | (Chen <i>et al.</i> , 2002)              |
| <b>DRB1*0441</b>         | —                                | —   | DRB1*04031var        | NT0021  | AF352293  | (Chen <i>et al.</i> , 2002)              |
| <b>DRB1*0442</b>         | DR4                              | —   | —                    | JH71321   | AF304866  | (Dunn <i>et al.</i> , 2001)              |
| <b>DRB1*0443</b>         | —                                | —   | —                    | OORCH18   | AY042678, AF349316  | (Chen <i>et al.</i> , 2002), J Tang      |
| <b>DRB1*0444</b>         | —                                | —   | —                    | satt44124   | AF497643  | I Humphreys                              |
| DRB1*070101              | DR7                              | Dw17, Dw'DB1'                                   | —                    | BURKHARDT, MANN, LBF  | M16941, M17384, U09201  |  |
| DRB1*070102              | DR7                              | —   | DRB1*07New           | CBM500  | AJ243327  |  |
| DRB1*0703                | DR7                              | —   | DRB1*07RMT           | ED01436   | Y13785  |  |
| DRB1*0704                | DR7 <sup>c</sup>                 | —   | DRB1*07ROS           | 12827878  | Y16224  |  |
| <b>DRB1*0705</b>         | —                                | —   | —                    | NT0012  | AF327742  | (Tang <i>et al.</i> , 2002)              |
| <b>DRB1*0706</b>         | —                                | —   | —                    | 13765   | AJ311892  | JHM Cohen                                |
| DRB1*080101              | DR8                              | Dw8.1   | DRB1*0801            | MADURA, SUDNA0140, U-STH, BM9,<br>MTP1 134873, MULRe, 1823-T, BTB | M17386, L78166, AF144105,<br>AF121971, AJ249626, AF278701,<br>AY028514, AY028515, AY028516,<br>AY028517, AY028518, AY028519 | (Greville & Dunckley, 2002) <sup>b</sup> |
| <b>DRB1*080102</b>       | —                                | —   | —                    | GN00415   | AF491843  | CK Hurley                                |
| DRB1*080201              | DR8                              | Dw8.2   | DRw8-SPL             | SPL, 24A2   | AF029277  |  |
| DRB1*080202              | DR8                              | Dw8.2   | DRw8b                | OLL, C-78   | AF029278  |  |
| <b>DRB1*080203</b>       | DR8                              | —   | —                    | NT0014  | AF327743  | CK Hurley                                |
| DRB1*080302              | DR8                              | Dw8.3   | DRw8-TAB             | KT, FO, POPE, TAB089  | M27511, AJ001094  |  |
| DRB1*080401              | DR8                              | —   | RB1066-1, DR8-V86    | 1066, 1127, PM, MTR   | M84446, M34315, AF029279  |  |
| DRB1*080402              | DR8                              | —   | —                    | CAY3, CAY5, CAY92, CAY96  | L10402  |  |
| DRB1*080403              | DR8                              | —   | —                    | UWEH03  | U88135  |  |
| <b>DRB1*080404</b>       | DR8                              | —   | —                    | NT0016  | AF330103  | CK Hurley                                |
| DRB1*0805                | DR8                              | —   | DR8-A74              | MS  | M84357  |  |
| DRB1*0806                | DR8                              | —   | DR8.6                | RBL B24, RBL B124, SET, BOU, ALG, C.R.,<br>SUDNA0095              | M87543, M86590, Z32685, L78165  |  |
| DRB1*0807                | DR8                              | —   | DR8BZ                | AG, RG, L2, L4, TIC03, TIC04, TIC06                               | L22341, L28096  |  |
| DRB1*0808                | —                                | —   | 08New                | ETH3754   | X75443  |  |
| DRB1*0809                | DR8                              | —   | DR8.7, DRB1*8.2V     | BRI-10, JB44585   | L23987, D45046, AB046526  |  |
| DRB1*0810                | DR8                              | —   | LP10-1               | K.R., R.R., TH10559   | L19054, X82553  |  |
| DRB1*0811                | DR8                              | —   | DR8TL, DR8New        | ARA016, ARAC25, JR  | L29082, L32810  |  |
| DRB1*0812                | DR8                              | —   | DRB#52               | 4390, DRB#52  | X88854, U36836  |  |
| DRB1*0813                | —                                | —   | DRB#47               | DRB#47, 29168   | U36571, AJ495001  | T Gervais <sup>b</sup>                   |

**Table 5.** *Continued*

| HLA alleles <sup>a</sup> | HLA-DR serological specificities | HLA-D-associated (T-cell-defined) specificities | Previous equivalents            | Individual or cell line from which the sequence was derived | Accession number                               | References or submitting author(s) |
|--------------------------|----------------------------------|---|---------------------------------|---|--|------------------------------------|
| DRB1*0814                | DR8                              | —   | DR8WE                           | WE, KE  | U24179   |                                    |
| DRB1*0815                | —                                | —   | DRB1*08Taree                    | TDS-023   | U63802   |                                    |
| DRB1*0816                | DR8                              | —   | DRB1*08JST                      | ML0273, 24131   | X99840, AJ309930                               | M Guttridge <sup>b</sup>           |
| DRB1*0817                | DR8                              | —   | DRB1*08LRT                      | RV0253  | Y09665   |                                    |
| DRB1*0818                | —                                | —   | HLAAL1, HLA-DR8.5va             | DKM379804, dJAE-0173, DU32971                               | U96926, Z99006, AJ223124                       |                                    |
| DRB1*0819                | —                                | —   | DRB1*08YF, DRB1*08BL            | VBD21599B, RP-BL046   | AF016225, AF028011                             |                                    |
| DRB1*0820                | —                                | —   | DRB182624                       | 82624   | AJ000927                                       |                                    |
| DRB1*0821                | —                                | —   | —                               | ROD01   | AF049875                                       |                                    |
| DRB1*0822                | —                                | —   | DRB1*08New                      | R9846, R9028  | AJ276711                                       |                                    |
| DRB1*0823                | —                                | —   | DRB1*08032V1                    | JCB13444  | AB049829                                       |                                    |
| <b>DRB1*0824</b>         | —                                | —   | DRB1*08022var                   | GN00391   | AF363728                                       | L Burdett                          |
| DRB1*090102              | DR9                              | Dw23  | —                               | DKB, 09012, PMR, ISK  | M17387, U66826, D89917                         |                                    |
| <b>DRB1*0902</b>         | —                                | —   | —                               | J69   | AY043181                                       | (Lin <i>et al.</i> , 2002)         |
| DRB1*100101              | DR10                             | —   | —                               | RAJI, NASC  | M20138   |                                    |
| DRB1*100102              | DR10                             | —   | DRB1*10New                      | AW10-LCL  | AF225565                                       |                                    |
| DRB1*110101              | DR11(5)                          | Dw5   | DRw11.1                         | SWEIG   | M11867   |                                    |
| DRB1*110102              | DR11(5)                          | Dw5   | —                               | 1180, 1249  | M34316   |                                    |
| DRB1*110103              | DR11(5)                          | Dw5   | DR11.MD, DRB1*11DCT             | DR11MDA, DR11MDB, BV3402                                    | X86803, Y07590                                 |                                    |
| <b>DRB1*110104</b>       | DR11(5)                          | —   | —                               | NT0015  | AF329281                                       | (Tang <i>et al.</i> , 2002)        |
| DRB1*1102                | DR11(5)                          | Dw'JVM'   | DRw11.2                         | JVM, LTI  | M17382, AF029280                               |                                    |
| DRB1*1103                | DR11(5)                          | —   | DRw11.3                         | UA-S2   | M21966, M22047-49                              |                                    |
| DRB1*110401              | DR11(5)                          | Dw'FS'  | —                               | FPA (PPF), 34A2, FPF  | AF029281, AJ297587                             | SGE Marsh <sup>b</sup>             |
| DRB1*110402              | DR11(5)                          | —   | —                               | 2094, 17A1  | M34317, AF029282                               |                                    |
| DRB1*1105                | DR11(5)                          | —   | —                               | DBUG  | M84188   |                                    |
| DRB1*1106                | DR11(5)                          | —   | DR11.CCY, 11PMH                 | CCY, PMH161   | M98436, D14352                                 |                                    |
| DRB1*1107                | DR11(5) <sup>c</sup>             | —   | DR11+3                          | BEL6KG, RMS21   | X73027, X82507                                 |                                    |
| DRB1*110801              | DR11(5)                          | —   | DR11JL                          | JL  | L21984   |                                    |
| DRB1*110802              | DR11(5)                          | —   | DR11HW                          | HW  | L21983   |                                    |
| DRB1*1109                | DR11(5)                          | —   | DRB1*MON                        | BEL7MON   | X75347   |                                    |
| DRB1*1110                | DR11(5) <sup>c</sup>             | —   | DR11.5                          | BRI-6   | L23986   |                                    |
| DRB1*1111                | DR11(5) <sup>c</sup>             | —   | DR11.6, DR11BRA                 | BRI-7, 1082   | L23990, L26306                                 |                                    |
| DRB1*111201              | —                                | —   | DR11.7                          | BRI-9, 008  | L23988, AF234175                               |                                    |
| DRB1*111202              | DR11(5)                          | —   | —                               | SWP71   | AJ251984                                       |                                    |
| DRB1*1113                | DR11(5)                          | —   | DR11-14, DR11+14                | PAL-6117, 30251, EmKa, SB, BV0595, JOK                      | X76194, L29081, U09200, U03291, Z37162, X87677 |                                    |
| DRB1*1114                | DR11(5)                          | —   | F1363, 115T, 94-09865           | BRI-11, HN0605, DJB, BEN, 12762                             | U08932, Z37161, U25639, Z50187, AJ245714       |                                    |
| DRB1*1115                | —                                | —   | DR1101v                         | Z.S., Z.Z., Z.Z.V., GN041, GN037                            | Z34824, U17380                                 |                                    |
| DRB1*1116                | DR11(5) <sup>c</sup>             | —   | DRB1*OULA, DR11+13              | OULA, HB7542AKG   | U13009, X87200                                 |                                    |
| DRB1*1117                | —                                | —   | UCSF-D3152, DR11-14N, 0104D0335 | D3152, D3153, GN032, 950104-D0335                           | X77776, U17379, U33474                         |                                    |

**Table 5.** *Continued*

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|--------------------------|----------------------------------|---|----------------------|---|--|--|
| DRB1*1118                | —                                | —   | RMS16                | RMS16   | X82211   |  |
| DRB1*1119                | DR11(5) <sup>c</sup>             | —   | RMS117, DR11Loel     | RMS117, MB, KBD   | X82210, Z47353, U26558   |  |
| DRB1*1120                | DR11(5)                          | —   | —                    | CV  | U25442   |  |
| DRB1*1121                | DR11(5)                          | —   | —                    | MUL   | X86976   |  |
| DRB1*1122                | —                                | —   | —                    | ZL3096  | Z49113   |  |
| DRB1*1123                | DR11(5)                          | —   | DRB1*11OS            | YAS   | D49468   |  |
| DRB1*1124                | —                                | —   | 7CGCE                | JB, DZA95-7C  | X89193, Z50746   |  |
| DRB1*1125                | DR11(5)                          | —   | DR11x08              | SimE, TAR   | X91823, X97291   |  |
| DRB1*1126                | DR11(5)                          | —   | DRB.W11              | WAN   | X94350   |  |
| DRB1*112701              | DR11(5)                          | —   | 2166/1018            | M.K.  | X95656   |  |
| DRB1*112702              | DR11(5)                          | —   | DRB1*11New           | E404, E405, E434, NMDP0361-0724-1                           | AF186407, AF186408, AJ401148                                   |  |
| DRB1*1128                | —                                | —   | DRB1*11Var           | LELIEAM, 980102   | X97722, AF047350   |  |
| DRB1*1129                | DR11(5)                          | —   | DRB1*11PBT           | CL1281, 21690   | X99841, AJ245715   |  |
| DRB1*1130                | —                                | —   | —                    | GN00153   | U79027   |  |
| DRB1*1131                | —                                | —   | DRB1*VIC             | CTM4065412  | U72064   |  |
| DRB1*1132                | —                                | —   | MANDRAY Arlette      | MA96401984  | AF011786   |  |
| DRB1*1133                | —                                | —   | DR11New, DRB1*JG     | DU13673, BM1 101910   | AF034858, AF112877   |  |
| DRB1*1134                | —                                | —   | —                    | GN00236   | AF081676   |  |
| DRB1*1135                | —                                | —   | DRB1*TG              | DIA3 128504   | AF112878   |  |
| DRB1*1136                | —                                | —   | DRB1*1102v           | NT0001  | AF144081   |  |
| DRB1*1137                | —                                | —   | DRB1*11LF            | LIFU  | AJ249726   |  |
| DRB1*1138                | —                                | —   | DRB1*CB3202          | CB3202  | AF247534   |  |
| DRB1*1139                | —                                | —   | DRB1*CB1801          | CB1801, DKM649157   | AF267639, AJ404618   |  |
| DRB1*1140                | —                                | —   | DRB1*11MMK           | TO05334   | AJ289124   |  |
| DRB1*1141                | —                                | —   | DRB1*1103v           | NT0011  | AF280436   |  |
| <b>DRB1*1142</b>         | —                                | —   | —                    | FPO   | AJ306404   | A. Dormoy                                |
| <b>DRB1*1143</b>         | —                                | —   | DRB1*CB4551          | CB4551  | AF450093   | (Greville et al., 2002a)                 |
| DRB1*120101              | DR12(5)                          | Dw'DB6'   | DRB1*EBROW           | HERLUF, FO, HK, POPE, SWS53, EBROW                          | M27635, M27509, S48645, AJ293695, AJ293696, AF335319, AF335320 | (Greville & Dunckley, 2002) <sup>b</sup> |
| <b>DRB1*120102</b>       | DR12(5)                          | —   | —                    | BS464263  | AJ293725, AJ302075   | (Zanone et al., 2002)                    |
| DRB1*120201              | DR12(5)                          | —   | DRw12b               | KI  | M27510   |  |
| DRB1*120202              | DR12(5)                          | —   | DRB1*1202X           | BP-9, BP-21   | L34353   |  |
| DRB1*120302              | DR12(5)                          | —   | DRB1*12JBT           | T00341  | X83455   |  |
| DRB1*1204                | DR5 <sup>c</sup>                 | —   | MHT#12v              | MHT#918   | U39087   |  |
| DRB1*1205                | DR12(5)                          | —   | —                    | JC2862  | D86503   |  |
| DRB1*1206                | DR12(5)                          | —   | DRB1*12XX            | K-KT  | U95989, AF017439   |  |
| DRB1*1207                | —                                | —   | DRB1*TCOX            | TCOX  | AF315825, AF316619   |  |
| <b>DRB1*1208</b>         | —                                | —   | DRB1*12variant       | 13365831  | AY033428   | (Sheldon et al., 2002)                   |
| DRB1*130101              | DR13(6)                          | Dw18  | DRw6a I, DR1301Var   | HHKB, APD, W468R, W468D                                     | M17383, X04056, U83583   |  |
| DRB1*130102              | DR13(6)                          | —   | DRB1*13new           | 19783VO   | AJ271206   |  |

**Table 5.** *Continued*

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|--------------------------|----------------------------------|---|-----------------------|--|--|------------------------------------|
| DRB1*130201              | DR13(6)                          | Dw19  | DRw6c I, DR1302Var    | WT46, CMCC, AS, W556R, W556D                                   | L76133, U83584                         |                                    |
| DRB1*130202              | DR13(6)                          | —   | DRB1*RMAY, FM99/810   | R MAY, FM99/810  | AF176834, AF217961                     |                                    |
| DRB1*130301              | DR13(6)                          | Dw'HAG'   | —                     | HAG, MRS, EGS, OSC, MGA, JRS, 1181, 1183, 2708, IH, JS, MD, SK | X52451, X16649, M59798, M57599         |                                    |
| DRB1*130302              | DR13(6)                          | Dw'HAG'   | —                     | 11118-CMN, 22127-EC  | U41634, U34602                         |                                    |
| DRB1*1304                | DR13(6)                          | —   | RB1125-14             | 1124, 1125   | M59803                                 |                                    |
| DRB1*1305                | DR13(6)                          | —   | DRw6'PEV', DRB1*13.MW | TA, JP, HS, BP, DES.DI, SUDNA0165, 17A2 MW                     | M57600, L78167, AF029283 M81343        |                                    |
| DRB1*1306                | DR13(6)                          | —   | DRB1*13.MW            | JJY, SHN, SLIR1-13   | L06847, D13189, AF305212               |                                    |
| DRB1*130701              | DR13(6)                          | —   | DRB1*JJY, DRB1*SHN    | GN00185  | AF036944                               |                                    |
| DRB1*130702              | DR13(6)                          | —   | —                     | THA  | L03531                                 |                                    |
| DRB1*1308                | DR13(6)                          | —   | DRB1*YUN              | MJD  | L23534                                 |                                    |
| DRB1*1309                | —                                | —   | 13NEW                 | ARA, 13345532, 13976036  | X75442, AJ245716, AJ409215             | M Guttridge <sup>b</sup>           |
| DRB1*1310                | DR13(6)                          | —   | 1303-Like             | H108, HER-2698, 108393x  | X74313, X75445, AJ243898               |                                    |
| DRB1*1311                | DR13(6)                          | —   | DR13BRA, DR13.7       | 650, 651, 681, BRI-8, N170, CC75, AD-6168, DNAQC012, RMS103    | L25427, L23989, D29836, L27216, X82508 |                                    |
| DRB1*1312                | DR13(6) <sup>c</sup>             | —   | DRB1*13/8             | NORH01, NORH02, XX406  | U79025, U79026, Y17272                 |                                    |
| DRB1*1313                | DR13(6) <sup>c</sup>             | —   | 1101A58, 13New        | BRI-12, YAS, 11684232  | U08274, X82239, AJ245717               |                                    |
| DRB1*131401              | DR13(6)                          | —   | DRB1*13MJ             | 31854  | AJ243897                               |                                    |
| DRB1*131402              | DR13(6)                          | —   | 83-7601               | BRI-14, GN070  | U08276, U32325                         |                                    |
| DRB1*1315                | —                                | —   | DRB1*D86              | BRI-15, JA   | U08277, U25638                         |                                    |
| DRB1*1316                | DR13(6)                          | —   | RB1194 13/12          | RB   | U03721                                 |                                    |
| DRB1*1317                | DR13(6)                          | —   | DRB1*13HZ             | K27418, TH10913, ZAN FR  | Z36884, X82549, Z48631                 |                                    |
| DRB1*1318                | DR13(6)                          | —   | DR1308V               | GN033  | U17381                                 |                                    |
| DRB1*1319                | DR13(6) <sup>c</sup>             | —   | DRB1*13VHT, DRB1*13PL | SR0300, 10843566   | Z48803, Y17695                         |                                    |
| DRB1*1320                | DR13(6)                          | —   | DR13TAS               | ATAS   | L41992                                 |                                    |
| DRB1*1321                | —                                | —   | —                     | GvdP, LI3936   | X86326, X87886                         |                                    |
| DRB1*1322                | DR13(6) <sup>c</sup>             | —   | —                     | GN079  | U36827                                 |                                    |
| DRB1*1323                | —                                | —   | —                     | GN039  | U36825                                 |                                    |
| DRB1*1324                | —                                | —   | —                     | MRN5981  | X93924                                 |                                    |
| DRB1*1325                | —                                | —   | DRB1*16WIL,           | WIL3966, B.A-B   | X96396, Y11462                         |                                    |
| DRB1*1326                | —                                | —   | DRB1*14/16New         | —  |  |                                    |
| DRB1*1327                | DR13(6)                          | —   | DRB1*13MS, DRB1*13NW  | NVE 802  | Z71289, U59691, X97601                 |                                    |
| DRB1*1328                | —                                | —   | —                     | DU25503  | X97407                                 |                                    |
| DRB1*1329                | DR6                              | —   | —                     | JC6267   | D87822                                 |                                    |
| DRB1*1330                | —                                | —   | DRB1*13DAS            | DAS-094  | U72264                                 |                                    |
| DRB1*1331                | —                                | —   | —                     | GN00133, GN00138   | U88133, U88134                         |                                    |
| DRB1*1332                | —                                | —   | DR13MC                | AD-2111  | U97554                                 |                                    |
| DRB1*1333                | —                                | —   | DRB1*13TMT            | OTO1567  | AJ001254                               |                                    |
| DRB1*1334                | —                                | —   | —                     | 974770   | AF048688                               |                                    |
| DRB1*1335                | —                                | —   | DRB1*13Var            | GN00266-FV2397   | AF136155                               |                                    |

**Table 5.** *Continued*

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|--------------------------|----------------------------------|---|----------------------|---|--|--|
| DRB1*1336                | DR13(6)                          | —   | DR'RD', DRB1*JSMA    | RD-DJ, AA-DJ, JSMA, 30638                                   | AF089719, AF195786, AJ293898                         |  |
| DRB1*1337                | —                                | —   | DRB1*13New           | GN00256, NT0003   | AF169238, AF164346                                   |  |
| DRB1*1338                | —                                | —   | DRB1*13New           | 031188956   | AF169239   |  |
| DRB1*1339                | —                                | —   | DRB1*13PSB           | KMDP01-415  | AF170582, AF104018                                   |  |
| DRB1*1340                | —                                | —   | DRB1*13JP            | NE3114, NE3005  | AJ237964   |  |
| DRB1*1341                | —                                | —   | DRB1*Laton           | Laton   | AJ249591   |  |
| DRB1*1342                | DR13(6)                          | —   | DRB1*1318V           | NT0010, AN3SP6  | AF243537, AF288212                                   |  |
| DRB1*1343                | —                                | —   | DRB1*14New           | GN00221   | AF243538   |  |
| DRB1*1344                | —                                | —   | DRB1*GDES            | GDES  | AF247533   |  |
| DRB1*1345                | —                                | —   | —                    | SG606319  | AJ276873   |  |
| DRB1*1346                | —                                | —   | DRB1*AHAW            | AHAW  | AF306862   |  |
| DRB1*1347                | —                                | —   | DRB1*1307V1          | JCB12184  | AB049459   |  |
| <b>DRB1*1348</b>         | —                                | —   | —                    | 20281   | AJ401236   | A Moine                                    |
| <b>DRB1*1349</b>         | —                                | —   | DRB1*1312var         | NT0023  | AF352295   | (Tang <i>et al.</i> , 2002)                |
| <b>DRB1*1350</b>         | —                                | —   | —                    | 1DM4038S1   | AY048687   | Y-J Lee                                    |
| <b>DRB1*1351</b>         | —                                | —   | —                    | LPC14   | AF441789   | M Lin-Chu                                  |
| <b>DRB1*1352</b>         | —                                | —   | —                    | R.171   | AF499445   | SG Rodriguez-Marino                        |
| DRB1*140101              | DR14(6)                          | Dw9   | DRw6b I              | 4/w6, TEM, 15B1   | X04057, AF029284, AJ297582                           | (Corell <i>et al.</i> , 2002) <sup>b</sup> |
| DRB1*140102              | DR14(6)                          | —   | DRB1*14ML            | BV17214   | AJ289123   |  |
| DRB1*1402                | DR14(6)                          | Dw16  | —                    | AMALA (LIA, AZL) <sup>c</sup> , 15B3                        | AF029285, AJ297583                                   | (Corell <i>et al.</i> , 2002) <sup>b</sup> |
| DRB1*1403                | DR1403                           | —   | JX6                  | MI  | AJ297584   | (Corell <i>et al.</i> , 2002) <sup>b</sup> |
| DRB1*1404                | DR1404                           | —   | DRB1*LY10, DRw6b.2   | CEPH-137502, KGU  | M58632, AJ297585                                     | (Corell <i>et al.</i> , 2002) <sup>b</sup> |
| DRB1*1405                | DR14(6)                          | —   | DRB1*14c             | 36M, 38M, SUDNA0503, GN00402, GN00404                       | M60209, L78168, AY050209, AY050210                   | (Gans <i>et al.</i> , 2002) <sup>b</sup>   |
| DRB1*1406                | DR14(6)                          | —   | DRB1*14.GB, 14.6     | GB, SAS5041, SAS9080, SUDNA0164, 24A3, GN00405, GN00407     | M63927, M74032, L78164, AF029286, AY050211, AY050214 | (Gans <i>et al.</i> , 2002) <sup>b</sup>   |
| DRB1*140701              | DR14(6)                          | —   | 14.7                 | PNG141, PNG196, 43A1, GN00400, GN00401                      | M74030, AF029287, AY050207                           | CK Hurley <sup>b</sup>                     |
| <b>DRB1*140702</b>       | DR14(6)                          | —   | —                    | GN00403   | AY052549   | CK Huley                                   |
| DRB1*1408                | DR14(6) <sup>c</sup>             | —   | A01, 14.8            | HV178, PNG198, PNG202, GN00409                              | M77673, M74031, AY052550                             | (Gans <i>et al.</i> , 2002) <sup>b</sup>   |
| DRB1*1409                | —                                | —   | AB4                  | 1103  | M77671   |  |
| DRB1*1410                | DR14(6) <sup>c</sup>             | —   | AB3                  | ABCC31  | M77670   |  |
| DRB1*1411                | DR14(6)                          | —   | DRw14x11             | MARBrun, MARMari, MARMarg                                   | M84238   |  |
| DRB1*1412                | DR14(6)                          | —   | DRB1*YOS             | YOS   | D16110   |  |
| DRB1*1413                | DR14(6)                          | —   | —                    | GRC138  | L21755   |  |
| DRB1*1414                | DR14(6)                          | —   | DRB1*14N             | AD-2927, AD-3798, IHL AD036                                 | L17044   |  |
| DRB1*1415                | DR8                              | —   | DRB1*14af            | D.M.  | U02561   |  |
| DRB1*1416                | DR6                              | —   | DR13+14              | FVA-0166  | X76195   |  |
| DRB1*1417                | DR6                              | —   | 1412T                | #15310-LN   | X76938   |  |
| DRB1*1418                | DR6                              | —   | 81-4641              | BRI-13, TH6994, DR14BBD                                     | U08275, X82552, U37264                               |  |
| DRB1*1419                | DR14(6)                          | —   | DRB1*14MA, DRB.14a   | MA-TE, AKKAL  | Z38072, X86973                                       |  |
| DRB1*1420                | DR14(6)                          | —   | DRB.14o              | OND-52971   | X86974   |  |

**Table 5.** *Continued*

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|--------------------------|----------------------------------|---|------------------------------|---|-------------------------------------|------------------------------------|
| DRB1*1421                | DR14(6) <sup>c</sup>             | —   | DRB14t                       | TGI   | X86975                              |                                    |
| DRB1*1422                | DR14(6) <sup>c</sup>             | —   | DRB1*BA                      | LS005, BA   | Z50730, Z71275                      |                                    |
| DRB1*1423                | —                                | —   | DRB1*14                      | #66820, SAR   | X91640, Z84375                      |                                    |
| DRB1*1424                | —                                | —   | BY14V, BRAVOG,<br>DRB1*14Pal | BY00002, HDB, PALT, SERL                                    | U41489, AJ000900, AF052574          |                                    |
| DRB1*1425                | —                                | —   | HL14V                        | HL.BWH, MF.BWH  | U41490, U41491                      |                                    |
| DRB1*1426                | DR14(6)                          | —   | —                            | JC1980  | D86502, D50865                      |                                    |
| DRB1*1427                | DR14(6)                          | —   | —                            | MO52  | D86504                              |                                    |
| DRB1*1428                | —                                | —   | DRB1*14DKT                   | TO4138  | X99839                              |                                    |
| DRB1*1429                | DR14(6)                          | —   | —                            | JC6094  | D88310                              |                                    |
| DRB1*1430                | —                                | —   | DRB1*14CB                    | CB-254  | U95115                              |                                    |
| DRB1*1431                | —                                | —   | DRB1*14JV                    | RP-JV129  | AF028010                            |                                    |
| DRB1*1432                | —                                | —   | DRB1*14JW                    | GAIB  | AJ010982                            |                                    |
| DRB1*1433                | —                                | —   | DRB1*LAM                     | CB1 116643  | AF112879                            |                                    |
| DRB1*1434                | —                                | —   | —                            | R98-333250Q   | AF172071                            |                                    |
| DRB1*1435                | —                                | —   | DRB1*SDAV                    | SDAV  | AF177215                            |                                    |
| DRB1*1436                | —                                | —   | DRB1*New                     | IHL   | AJ242985                            |                                    |
| DRB1*1437                | —                                | —   | DRB1*1309New                 | SWP43   | AJ251985                            |                                    |
| DRB1*1438                | —                                | —   | DRB1*1401V1                  | JCB14069  | AB049830                            |                                    |
| DRB1*1439                | —                                | —   | DRB1*1401V2                  | JCB15932  | AB049831                            |                                    |
| DRB1*1440                | —                                | —   | DRB1*1403V2                  | JCB24742  | AB049832                            |                                    |
| <b>DRB1*1441</b>         | —                                | —   | —                            | 04RCH28   | AY050186, AF339884                  | CK Hurley, J Tang                  |
| <b>DRB1*1442</b>         | —                                | —   | —                            | GN00411   | AY054375                            | CK Hurley                          |
| <b>DRB1*1443</b>         | —                                | —   | —                            | P87043M1  | AF400066                            | M Lin-Chu                          |
| DRB1*150101              | DR15(2)                          | Dw2   | DR2B Dw2                     | PGF, ROF-NL   | M17378, M16957, M20430              |                                    |
| DRB1*150102              | DR15(2)                          | Dw2   | DRB1*15MT                    | LD0797  | Z48359                              |                                    |
| <b>DRB1*150103</b>       | —                                | —   | DRB1*15011var                | BY00017   | AF363727                            | L Burdett                          |
| <b>DRB1*150104</b>       | —                                | —   | —                            | R24489  | AJ431718                            | J Mytilineos                       |
| DRB1*150201              | DR15(2)                          | Dw12  | DR2B Dw12                    | BGE, DHO, 20A1  | M16958, M30180, M28584,<br>AF029289 |                                    |
| DRB1*150202              | DR15(2)                          | Dw12  | DR2MU                        | CMURD   | L23964                              |                                    |
| DRB1*150203              | DR15(2)                          | —   | DRB1*15JMT                   | HN08729   | AJ001253                            |                                    |
| DRB1*1503                | DR15(2)                          | —   | —                            | G247, M851, M848, 20A2                                      | M35159, AF010142, AF029290          |                                    |
| DRB1*1504                | DR15(2)                          | —   | DR2DAI                       | D13, D53, HM  | L23963, L34025                      |                                    |
| DRB1*1505                | DR15(2)                          | —   | DRB1*15KY                    | K.W.  | D49823                              |                                    |
| DRB1*1506                | DR15(2)                          | —   | —                            | JB317836, RP, CANSIN009, INDRAN001,<br>INDRAN003            | D63586, U45999, X98256              |                                    |
| DRB1*1507                | DR15(2) <sup>c</sup>             | —   | DRB1*15LJM                   | UBM12218693   | Y15404                              |                                    |
| DRB1*1508                | DR2                              | —   | DRB1*15021V                  | JC3399  | AB007634                            |                                    |
| DRB1*1509                | —                                | —   | —                            | R98-903841B   | AF172070                            |                                    |
| DRB1*1510                | —                                | —   | —                            | 98-2028, 98-2500, GN00320                                   | AF191104, AF243536                  |                                    |

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| DRB1*1511                | —                                | —   | —                    | NR-GLW  | AJ293861                                 |                                    |
| <b>DRB1*1512</b>         | —                                | —   | —                    | VTIS24502   | AF373015                                 | M Varney                           |
| <b>DRB1*1513</b>         | —                                | —   | DRB1*TT68            | TT68  | AF239244                                 | R Holdsworth                       |
| DRB1*160101              | DR16(2)                          | Dw21  | DR2B Dw21            | AZH, MN-2, FJO, W692D, W738D, 20A3                          | M16959, M30179, M28583, U56640, AF029291 |                                    |
| DRB1*160102              | DR16(2)                          | Dw21  | —                    | GN00150   | U59686                                   |                                    |
| DRB1*160201              | DR16(2)                          | Dw22  | DR2B Dw22            | REM (RML), 20A4   | M20504, AF029292                         |                                    |
| DRB1*160202              | DR16(2)                          | Dw22  | DRB1*16MADANG        | MAD009  | U38520                                   |                                    |
| DRB1*1603                | DR2                              | —   | —                    | JWR   | L02545                                   |                                    |
| DRB1*1604                | DR16(2)                          | —   | DRB1*16x8            | BONA, FORE  | L14852                                   |                                    |
| DRB1*1605                | DR16(2) <sup>c</sup>             | —   | 16PRET               | E.H.B., PRET4149  | X74343, X75444                           |                                    |
| DRB1*1607                | —                                | —   | DR2Mut               | USH   | U26659                                   |                                    |
| DRB1*1608                | —                                | —   | DRB1*(Gi + Pi)       | Gi, Pi  | Z72424                                   |                                    |
| DRB2*0101                | —                                | —   | —                    | AVL   | M86691, M86694, M16274, M16275           |                                    |
| DRB3*010101              | DR52                             | Dw24  | DR3 III, DRw6a III   | AVL, HHKB, DM28, DM29, CMCC, U-STH                          | X04055, X04058, AF152844                 |                                    |
| DRB3*01010201            | DR52                             | Dw24  | dJ172K2, DRB3*01012  | PMR, HSF7, W461R  | U66825, Z84814, AF000448                 |                                    |
| DRB3*01010202            | DR52                             | Dw24  | —                    | GN00199, 23054638   | AF092089, AF092176, AF199236             |                                    |
| DRB3*010103              | DR52                             | Dw24  | DRB3*MOBD            | MO, BD  | X99771                                   |                                    |
| DRB3*010104              | DR52                             | —   | DRB3*01BTT           | TO02021   | Y10553                                   |                                    |
| DRB3*0102                | DR52                             | —   | DRB3*N409            | 409/96-UKN  | Y08063                                   |                                    |
| DRB3*0103                | —                                | —   | DRB3*DF              | DF  | U94590                                   |                                    |
| DRB3*0104                | —                                | —   | —                    | GN00139   | AF026467                                 |                                    |
| DRB3*0105                | —                                | —   | —                    | GN00234   | AF081677                                 |                                    |
| DRB3*0106                | DR52                             | —   | DRB3*01EGT           | EG-OT   | AJ242860                                 |                                    |
| DRB3*0107                | DR52                             | —   | DRB3*01ABT           | AB-OT   | AJ242862                                 |                                    |
| <b>DRB3*0108</b>         | —                                | —   | —                    | 1507-33405  | AF361865                                 | C Löiger                           |
| <b>DRB3*0109</b>         | —                                | —   | —                    | GN00394   | AY042679                                 | CK Hurley                          |
| <b>DRB3*0110</b>         | —                                | —   | DRB3*01MGT           | CL06453   | AJ315477                                 | S Tavoularis                       |
| DRB3*0201                | DR52                             | Dw25  | DRw6b III            | 4/w6, DM24  | M17380, V00522                           |                                    |
| DRB3*020201              | DR52                             | Dw25  | pDR5b.3              | SWEIG, WT49, U-STH  | X99690, AF152845                         |                                    |
| DRB3*020202              | DR52                             | —   | DRB3*02CVT           | CV-OT   | AJ242861                                 |                                    |
| DRB3*020203              | DR52                             | —   | DRB3*SSOM            | SSOM  | AF177216                                 |                                    |
| <b>DRB3*020204</b>       | DR52                             | —   | —                    | GN00418   | AY094138                                 | CK Hurley                          |
| DRB3*0203                | DR52                             | —   | DRB3.02p             | POS   | X86977                                   |                                    |
| DRB3*0204                | —                                | —   | —                    | SCHT  | X91639                                   |                                    |
| DRB3*0205                | —                                | —   | DRB3*02-03v          | GN068   | U36826                                   |                                    |
| DRB3*0206                | —                                | —   | DRB3*02MT            | BV1661  | X95760                                   |                                    |
| DRB3*0207                | DR52                             | —   | DRB3new              | BML   | Y10180                                   |                                    |
| DRB3*0208                | DR52                             | —   | DRB3*02HMT           | BV02755   | AJ001255                                 |                                    |
| DRB3*0209                | DR52                             | —   | DRB3*02New           | p1454/bg287, Orietta Q.C.16/98                              | AF148518, AF132810                       |                                    |

**Table 5.** *Continued*

| HLA alleles <sup>a</sup> | HLA-DR serological specificities | HLA-D-associated (T-cell-defined) specificities | Previous equivalents | Individual or cell line from which the sequence was derived           | Accession number                            | References or submitting author(s)           |
|--------------------------|----------------------------------|---|----------------------|---|---|--|
| DRB3*0210                | DR52                             | —   | DRB3*02KM            | SMS145263 Diakon, CTM-9991295<br>NMDP#0236-9013-4                     | AJ238155, AF192259, AB035378                |  |
| DRB3*0211                | DR52                             | —   | DRB3*02NEW-A         | CTM-9991121   | AF192258                                    |  |
| DRB3*0212                | —                                | —   | DRB3*JWOO            | JWOO  | AF208484                                    |  |
| DRB3*0213                | —                                | —   | DRB3*HMAR            | HMAR  | AF208485                                    |  |
| <b>DRB3*0214</b>         | —                                | —   | —                    | 00F03, 00F10, 00F13   | AJ290395                                    | A Moine                                      |
| <b>DRB3*0215</b>         | —                                | —   | —                    | VTIS45001, VTIS45004  | AF427138, AF427139                          | M Varney                                     |
| <b>DRB3*0216</b>         | —                                | —   | —                    | 74356   | AF455114                                    | MS Leffell                                   |
| <b>DRB3*0217</b>         | —                                | —   | DRB3*VNGAZ           | VNGAZ, emanuela, PB-MID 65347,<br>FR-MID 65690, FR-MID 65691          | AF461431, AY033875, AJ441058                | H Dunckley,<br>A Malagoli, F Poli            |
| DRB3*030101              | DR52                             | Dw26  | —                    | WT46, CMCC  | —   |  |
| DRB3*030102              | DR52                             | Dw26  | DRB3*KL044           | RP-KL044  | AF242306                                    |  |
| DRB3*0302                | DR52                             | —   | DRB3*03KLT           | SJ00198   | Y13715                                      |  |
| DRB3*0303                | —                                | —   | DRB3*03SM            | RP-SM073  | AF028012                                    |  |
| DRB4*01010101            | DR53                             | —   | —                    | MANN, LBF, DKB,<br>BURKHARDT, KT3,<br>PRIESS, FS, DM24,<br>DM29, MMCC | M16942, M17385, M17388, M15071,<br>K02775   |  |
| DRB4*0102                | DR53                             | —   | DRB4*ICML            | C.M.L., CML   | L08621, D89879                              |  |
| DRB4*01030101            | DR53                             | —   | dJ93N13              | MJ4, BOLETH, HSF7, G081   | M15178, M20555, M19556, Z84477,<br>AF361548 | (De Pablo <i>et al.</i> , 2002) <sup>b</sup> |
| DRB4*01030102N           | Null                             | —   | DRB4null             | DBB   | D89918                                      |  |
| DRB4*010302              | DR53                             | —   | DRB4W778R            | W778R   | AF048707                                    |  |
| DRB4*010303              | DR53                             | —   | DRB4GL               | MG-CV, FOA2362, G081  | AJ242833, AJ297503, AF207709,<br>AF361549   | (De Pablo <i>et al.</i> , 2002) <sup>b</sup> |
| <b>DRB4*010304</b>       | —                                | —   | —                    | 14242   | AJ292564                                    | ME Fasano                                    |
| DRB4*0104                | —                                | —   | DRB4*CR210           | 69-218, 76-394  | X92712                                      |  |
| DRB4*0105                | DR53                             | —   | DRB4New              | 17345   | Y09313                                      |  |
| <b>DRB4*0106</b>         | —                                | —   | —                    | MKOST   | AF450316, AF450317                          | H Dunckley                                   |
| DRB4*0201N               | Null                             | —   | DRB4*VI              | GN016   | U50061, U70543, U70544                      |  |
| DRB4*0301N               | Null                             | —   | DRB4*v2              | GN017   | U70542                                      |  |
| DRB5*010101              | DR51                             | Dw2   | DR2A Dw2             | PGF, ROF-NL   | M17377, M16954, M20429                      |  |
| DRB5*010102              | DR51                             | Dw2   | —                    | GN00152   | U66721                                      |  |
| DRB5*0102                | DR51                             | Dw12  | DR2A Dw12            | BGE, DHO  | M16955, M30182, M16086                      |  |
| DRB5*0103                | —                                | —   | DRB5.Oli             | IND-24, IND-59, NT0002  | X86978, AF122887                            |  |
| DRB5*0104                | —                                | —   | DRB5*0101V           | GN045   | U31770                                      |  |
| DRB5*0105                | —                                | —   | —                    | CP5570  | X87210                                      |  |
| DRB5*0106                | —                                | —   | DRB5*New             | ZL4062  | Z83201                                      |  |
| DRB5*0107                | DR51                             | —   | DRB5*01CBT           | WI01846   | Y09342                                      |  |
| DRB5*0108N               | Null                             | —   | —                    | ES  | Y10318, Y17819                              |  |
| DRB5*0109                | —                                | —   | DRB5*01ART           | BV08663   | Y13727                                      |  |

**Table 5.** *Continued*

| HLA alleles <sup>a</sup> | HLA-DR serological specificities | HLA-D-associated (T-cell-defined) specificities | Previous equivalents                   | Individual or cell line from which the sequence was derived | Accession number                                  | References or submitting author(s) |
|--------------------------|----------------------------------|---|--|---|---|------------------------------------|
| DRB5*0110N               | Null                             | —   | DRB5*0102Null,<br>DRB5*CB848           | JAS, CB848  | AF097680, AF314541                                | H Dunckley <sup>b</sup>            |
| DRB5*0202                | DR51                             | Dw21, Dw22                                      | DR2A Dw21, DR2A Dw22                   | REM (RML), FJO, MN-2, AZH                                   | M16956, M30181, M20503, M15992,<br>M32578, X99939 |                                    |
| DRB5*0203                | —                                | —   | DRB5*HK                                | HK55  | M91001  |                                    |
| DRB5*0204                | —                                | —   | —                                      | GN00151   | U59685  |                                    |
| DRB5*0205                | —                                | —   | DRB5*02variant                         | TT030822  | AJ271159  |                                    |
| DRB6*0101                | —                                | —   | DRB $\sigma$ *0101, DRBX11             | BAC, BRO-2, HOM-2, KAS116,<br>MZ070782, HON, SAS6211        | X53357, M83892                                    |                                    |
| DRB6*0201                | —                                | —   | DRBX21, DRBVI                          | PGF, D0208915, CGG, BA, E4181324                            | M77284-7, X53358, M83893                          |                                    |
| DRB6*0202                | —                                | —   | DRB $\sigma$ *0201, DRBX22,<br>DRB6III | RML, KAS011   | M83204, M83894                                    |                                    |
| DRB7*010101              | —                                | —   | DRB $\psi$ 1                           | BOLETH, BH13  | K02772-4, L31617                                  |                                    |
| DRB7*010102              | —                                | —   | —                                      | PITOUT  | L31618  |                                    |
| DRB8*0101                | —                                | —   | DRBy2                                  | BOLETH  | M20556, M20557                                    |                                    |
| DRB9*0101                | —                                | —   | M4.2 b exon                            | MOU   | M15563  |                                    |

<sup>a</sup> Allele names given in bold type have been assigned since the 2000 Nomenclature report.<sup>b</sup> This reference is to a confirmatory sequence.<sup>c</sup> HLA specificity provided from the HLA dictionary (Hurley *et al.*, 1997; Schreuder *et al.*, 1999).

**Table 6.** Designations of HLA-DQA1, -DQB1 alleles

| HLA alleles <sup>a</sup> | HLA-DQ serological specificities | HLA-D-associated (T-cell-defined) specificities | Previous equivalents      | Individual or cell line from which the sequence was derived                                     | Accession number                         | References or submitting author(s) |
|--------------------------|----------------------------------|---|---------------------------|---|--|------------------------------------|
| DQA1*010101              | —                                | Dw1   | DQA 1.1, 1.9              | LG2, BML, KAS116  | L34082                                   |                                    |
| <b>DQA1*010102</b>       | —                                |   | DQA1*0101new              | MZ070782, LWAGS, PMG075   | AF322867, AF322868, AF322869             | ML Ashdown                         |
| DQA1*010201              | —                                | Dw2, w21, w19                                   | DQA 1.2, 1.19, 1.AZH      | PGF, LB, CMCC, AZH, WT46, DRA, ROF-NL, EMJ  | M20431, L34083                           |                                    |
| DQA1*010202              | —                                | Dw21  | —                         | KAS011  | L34084                                   |                                    |
| DQA1*0103                | —                                | Dw18, w12, w8, Dw'FS'                           | DQA 1.3, 1.18, DRw8-DQw1  | APD, TAB, FPF, WVB, 2012, E4181324  | M59802, L34085                           |                                    |
| DQA1*010401              | —                                | Dw9   | —                         | 1183, 2013, 2012, 2708, 31227ABO, EK, KOSE, DEK, REN  | M95170, L34086                           |                                    |
| DQA1*010402              | —                                | —   | DQA1*new                  | KGU   | AJ296091, AJ296092                       |                                    |
| DQA1*0105                | —                                | —   | —                         | AK93007, 1183, 2708   | L42625, L46877                           |                                    |
| DQA1*0106                | —                                | —   | 183DQA1                   | 183   |  |                                    |
| DQA1*0201                | —                                | Dw7, w11  | DQA 2, 3.7                | LG-10, BEI, DM24, DM28, DM29, MOU   | L34087                                   |                                    |
| DQA1*030101              | —                                | Dw4, w10, w13, w14, w15                         | DQA 3, 3.1, 3.2           | MMCC, JY, NIN, BML, DM24, DM29, BOLETH  | M29613, M29616, L34088                   |                                    |
| DQA1*0302                | —                                | Dw23  | DQA 3, 3.1, 3.2, DR9-DQw3 | ISK, DKB, YT  | M11124, L34089                           |                                    |
| DQA1*0303                | —                                | —   | —                         | YT  | L34089, L46878                           |                                    |
| DQA1*0401                | —                                | Dw8, Dw'RSH'                                    | DQA 4.2, 3.8              | ARC, 2041, MADURA, SPL (SPACH) <sup>b</sup>   | M33906, L34090                           |                                    |
| DQA1*050101              | —                                | Dw3, w5, w22                                    | DQA 4.1, 2, dJ93N13       | RAJI, CMCC, VAVY, HSF7, SWEIG   | X00370, K01160, L34091, Z84489           |                                    |
| DQA1*050102              | —                                | Dw5   | DQA 4.1, 2                | MG3   | —  |                                    |
| DQA1*0502                | —                                | —   | —                         | EMA   | U03675                                   |                                    |
| DQA1*0503                | —                                | Dw16  | —                         | AMALA   | L34093                                   |                                    |
| DQA1*0504                | —                                | —   | DQA1*05YD, DQA05MC        | YD-069, AD-YM23   | U85035, U97555                           |                                    |
| DQA1*0505                | —                                | Dw5, Dw22                                       | DQA 4.1, 2                | BM21, REM (RML), BM16   | AB006908, M20506, L34092                 |                                    |
| DQA1*060101              | —                                | Dw8   | DQA 4.3                   | LUY   | L34094                                   |                                    |
| DQA1*060102              | —                                | —   | —                         | RV  | Y09968                                   |                                    |
| DQB1*0201                | DQ2                              | Dw3   | DQB 2                     | WT49, CMCC, QBL, MZ, LD, VW, MOR, JNP, DM24, DM28, DM29, BEI, VAVY                              | K02405, M65043, M81140, L40179           |                                    |
| DQB1*0202                | DQ2                              | Dw7   | DQB 2                     | BURKHARDT, BH, MOU  | M81141, U07848, L34095                   |                                    |
| DQB1*0203                | DQ2                              | —   | DQB1*02DL, DQB1*GHA30     | RAQ, CAUCA254, CAUCA288, DL-13, GHA30   | Z35099, U33329, U39089, U39090, AB002468 |                                    |
| DQB1*030101              | DQ7(3)                           | Dw4, w5, w8, w13                                | DQB 3.1, DQ0301W515R      | SWEIG, DQB37, NIN, JHA, JR, JME, DC, JGL, LUY, BML, DM23, MG3, AMALA, W515R, CjAr, CaAr, 06-006 | M65040, L34096, U83582, M25325           |                                    |
| DQB1*030102              | DQ7(3)                           | —   | DQB1*03GPT                | HM00214   | AJ001256, Y10428                         |                                    |
| DQB1*0302                | DQ8(3)                           | Dw4, w10, w13, w14                              | DQB 3.2                   | BOLETH, FS, BIN40, WT51, DM24, DM29, JS, MMCC, VW, JNP, JOP, Priess, BrEh, 145b, DaHa           | M65038, K01499, L34097, M25326           |                                    |
| DQB1*03032               | DQ9(3)                           | Dw23, w11                                       | DQB 3.3                   | DBB, KOZ, 5112.103, DKB, 06-006   | M65039, M60028, L34098, M25328           |                                    |
| DQB1*03033               | DQ9(3)                           | —   | DQB1*03New                | G.C.  | AF093815                                 |                                    |
| DQB1*0304                | DQ7(3)                           | —   | DQB1*03HP, *03new         | HP, RG, M.M.  | M74842, M83770, X76553                   |                                    |

**Table 6.** *Continued*

| HLA alleles <sup>a</sup> | HLA-DQ serological specificities | HLA-D-associated (T-cell-defined) specificities | Previous equivalents            | Individual or cell line from which the sequence was derived | Accession number                  | References or submitting author(s) |
|--------------------------|----------------------------------|---|---------------------------------|---|-----------------------------------|------------------------------------|
| DQB1*030501              | DQ8(3)                           | —   | DQB1*03KC                       | G.P., M.A.<br>00L53   | X69169, X76554<br>AJ290396        |                                    |
| <b>DQB1*030502</b>       | —                                | —   | —                               | MAT   | D78569                            | A Moine                            |
| DQB1*0306                | DQ3                              | —   | DQB1*MAT                        | D4  | Z49215                            |                                    |
| DQB1*0307                | —                                | —   | DQB1*D4                         | 97-459#1  | AJ003005                          |                                    |
| DQB1*0308                | —                                | —   | —                               | W469D, W469R  | U66400                            |                                    |
| DQB1*0309                | —                                | —   | DQ3Var                          | CTM-8991127   | AF195245                          |                                    |
| DQB1*0310                | DQ8(3)                           | —   | DQB1*03new                      | VBALA   | AF439338                          | H Dunckley                         |
| <b>DQB1*0311</b>         | —                                | —   | —                               | 216305  | AF469118                          | K Schwarz                          |
| <b>DQB1*0312</b>         | —                                | —   | —                               | 10993426  | AF479569                          | J Wu                               |
| <b>DQB1*0313</b>         | —                                | —   | —                               | KT3, YT   | M13279, L34099                    |                                    |
| DQB1*0401                | DQ4                              | Dw15  | DQB 4.1, Wa                     | ARC, OLN, MZ, 2041, SPL (SPACH),<br>MADURA, RPET01          | M33907, M65042, L34100,<br>Z80898 |                                    |
| DQB1*0402                | DQ4                              | Dw8, Dw'RSH'                                    | DQB 4.2, Wa, E1448              | LG2, 45.1, BML, MVL, JR, MDR, WG, DC,<br>KAS116             | X03068, M65044, L34101            |                                    |
| DQB1*050101              | DQ5(1)                           | Dw1   | DQB 1.1, DRw10-DQw1.1           | COT.DA  | Y17290                            |                                    |
| DQB1*050102              | DQ5(1)                           | —   | DQB1*05COT                      | AZH, FJO, KAS011  | L34102                            |                                    |
| DQB1*050201              | DQ5(1)                           | Dw21  | DQB 1.2, 1.21                   | —   | AF463516                          | (Fu et al., 2002)                  |
| <b>DQB1*050202</b>       | —                                | —   | —                               | J16   | M65047, L34103, L40180            |                                    |
| DQB1*050301              | DQ5(1)                           | Dw9   | DQB 1.3, 1.9, 1.3.1             | WT52, HU129, HU128, EK                                      | —                                 |                                    |
| DQB1*050302              | DQ5(1)                           | Dw9   | DQB 1.3, 1.9, 1.3.2             | AP106, AP109, AP110, AP115                                  | M65046, M94773                    |                                    |
| DQB1*0504                | DQ5(1)                           | —   | DQB 1.9                         | DG, R.F.  | L34104, X89194, L40181            |                                    |
| DQB1*060101              | DQ6(1)                           | Dw12, w8  | DQB 1.4, 1.12                   | AKIBA, BGE, TAB, E4181324, B.H., B.S.                       | M86740                            |                                    |
| DQB1*060102              | DQ6(1)                           | Dw12, w8  | DQB1*0601var.                   | Sk, Rb  | AF000447                          |                                    |
| DQB1*060103              | DQ6(1)                           | —   | DQ06W649R                       | W649R   | M20432, M65048, L34105            |                                    |
| DQB1*0602                | DQ6(1)                           | Dw2   | DQB 1.5, 1.2                    | PGF, VYT, 2041, ROF-NL, AMAI, CjAr, CaAr                    | M25327                            |                                    |
| DQB1*0603                | DQ6(1)                           | Dw18, Dw'FS'                                    | DQB 1.6, 1.18                   | WVB, APD, FPF, 2012, OMW                                    | M65050, M34322, L34106            |                                    |
| DQB1*060401              | DQ6(1)                           | Dw19  | DQB 1.7, 1.19                   | CMCC, DAUDI, DM23, LD, WG, EMJ                              | M65051, L34107                    |                                    |
| DQB1*060402              | DQ6(1)                           | —   | DQB1*0604Variant                | GN015   | AF113250, U63321                  |                                    |
| DQB1*060501              | DQ6(1)                           | Dw19  | DQB 1.8, DQBSLE, 1.19b, 2013-24 | CI, KT, MR, 2013  | M36472, M59800, M65052            |                                    |
| DQB1*060502              | DQ6(1)                           | Dw19  | DQB1*MDvR-1                     | BEN53   | L26325                            |                                    |
| DQB1*0606                | —                                | —   | DQB1*WA1                        | LINE66  | M86226                            |                                    |
| DQB1*0607                | —                                | —   | DQB1*06BRI1                     | 08-2779-0, BN151  | M87041, AF112463                  |                                    |
| DQB1*0608                | DQ6(1) <sup>b</sup>              | —   | DQB1*06BRI2                     | R.W., BM675   | M87042, AF112464                  |                                    |
| DQB1*0609                | DQ6(1)                           | —   | DQB1*06AA                       | HO301, TRACHT, N076, AK93022                                | L19951, L27345, D29918,<br>L42626 |                                    |
| DQB1*0610                | —                                | —   | DQB1MC                          | M.M., M.G., N205, L13, L90                                  | X86327, Z75044                    |                                    |
| DQB1*061101              | DQ1                              | —   | UNM-95-228                      | #MUD0130-14998  | U39086                            |                                    |
| DQB1*061102              | DQ1                              | —   | DQB1*06new1                     | 6658K   | AJ012155                          |                                    |
| DQB1*0612                | DQ1                              | —   | DQB1*06GB                       | GB002   | X96420                            |                                    |

**Table 6.** *Continued*

| HLA alleles <sup>a</sup> | HLA-DQ serological specificities | HLA-D-associated (T-cell-defined) specificities | Previous equivalents | Individual or cell line from which the sequence was derived | Accession number   | References or submitting author(s) |
|--------------------------|----------------------------------|---|----------------------|---|--------------------|------------------------------------|
| DQB1*0613                | —                                | —   | DQB1*0602V           | BB-(2)  | U77344             |                                    |
| DQB1*0614                | DQ6(1)                           | —   | DQB1*06EMT           | OG00018   | AJ001257           |                                    |
| DQB1*0615                | —                                | —   | DQB1*06new2          | T890  | AJ012156           |                                    |
| DQB1*0616                | —                                | —   | 052DQB1              | 052   | AF087939           |                                    |
| DQB1*0617                | —                                | —   | 99-3039              | 15427-00/01/02  | AF181983           |                                    |
| <b>DQB1*0618</b>         | —                                | —   | DQB1*06nou           | IM0000053   | AY026349           | (Casamitjana et al., 2001)         |
| <b>DQB1*0619</b>         | —                                | —   | DQB1*0602Variant     | ACAR  | AF091305           | S Bowman                           |
| <b>DQB1*0620</b>         | —                                | —   | —                    | CB846   | AF384556, AY124588 | H Dunckley                         |

<sup>a</sup> Allele names given in bold type have been assigned since the 2000 Nomenclature report.<sup>b</sup> HLA specificity provided from the HLA dictionary (Hurley et al., 1997; Schreuder et al., 1999).**Table 7.** Designations of HLA-DPA1 and DPB1 alleles

| HLA alleles <sup>a</sup> | Associated HLA-DP specificities | Previous equivalents           | Individual or cell line from which the sequence was derived | Accession number               | References or submitting author(s) |
|--------------------------|---------------------------------|--------------------------------|---|--------------------------------|------------------------------------|
| DPA1*010301              | —                               | DPw4 $\alpha$ 1                | BOLETH, 3.1.0, LG2, PRIESS, LB                              | X03100, X82390, X82392, X82389 |                                    |
| DPA1*010302              | —                               | DPA1                           | 933-302-2   | AF074848                       |                                    |
| DPA1*0104                | —                               | 01New                          | SK  | X78198, X81348, X82391         |                                    |
| DPA1*0105                | —                               | DPA1*RK                        | DNA-RK  | X96984                         |                                    |
| DPA1*0106                | —                               | DPA1*Indian-024                | I024  | U87556                         |                                    |
| DPA1*0107                | —                               | DPA1*0103New                   | #913  | AF076284                       |                                    |
| <b>DPA1*0108</b>         | —                               | —                              | 936-563-6   | AF346471                       | (Grams et al., 2001)               |
| DPA1*020101              | —                               | DPA2, pDA $\alpha$ 13B         | DAUDI, AKIBA  | X82394, X82393, X78199         |                                    |
| DPA1*020102              | —                               | DPA1*TF                        | A371, L67, LB0410278  | L31624, X83610                 |                                    |
| DPA1*020103              | —                               | DPA1-CAM024,<br>DPA1*Cameroon2 | CAM024, CAM241, #63   | U94838, AF015295, AF076285     |                                    |

**Table 7.** *Continued*

| HLA alleles <sup>a</sup> | Associated HLA-DP specificities | Previous equivalents | Individual or cell line from which the sequence was derived | Accession number  | References or submitting author(s) |
|--------------------------|---------------------------------|----------------------|---|---|------------------------------------|
| DPA1*020104              | —                               | DPA1                 | 533-2929, 922-485-8   | AF074847  |                                    |
| DPA1*020105              | —                               | DPA1*PERR            | CC109   | AF098794  |                                    |
| DPA1*020106              | —                               | —                    | A.L.  | AF165160  |                                    |
| DPA1*020201              | —                               | 2.21                 | CB6B  | M83906, L11642, X79475, X80482, X79479                                      |                                    |
| DPA1*020202              | —                               | 2.22                 | LKT3, KT17, WI-L2 NS, CT46, EsSm, GIWh                      | M83907, L11641, X79476, X80484, X79480                                      |                                    |
| DPA1*020203              | —                               | DPA1*0202New         | #904  | AF092049  |                                    |
| DPA1*0203                | —                               | DPA1*TC48            | TC48  | Z48473  |                                    |
| DPA1*0301                | —                               | 3.1                  | AMAI  | M83908, X79477, X81347, X79481  |                                    |
| DPA1*0302                | —                               | DPA1*Cameroon        | CAM48, CAM59, CAM66, CAM100, CAM151                         | AF013767  |                                    |
| DPA1*0401                | —                               | 4.1                  | T7526   | M83909, L11643, X79478, X80483, X78200                                      |                                    |
| DPB1*010101              | DPw1                            | DPB1, DPw1b          | LUY, RSH, P0077, FB11                                       | M83129, M83664, M62338, X72070  |                                    |
| DPB1*010102              | DPw1                            | DPB1*WA6             | LINE 101, AH1457  | L19220, L27662  |                                    |
| DPB1*020102              | DPw2                            | DPB2.1               | 45.1, WJR076, LB, JY  | M62328, X03067, X99689  |                                    |
| DPB1*020103              | DPw2                            | DPB2.1               | CJ  | X94078  |                                    |
| <b>DPB1*020104</b>       | DPw2                            | —                    | CQ930-SEQ1643   | AF326565  | (Curcio et al., 2002)              |
| <b>DPB1*020105</b>       | DPw2                            | —                    | 27D   | AF462072  | M Varney                           |
| <b>DPB1*020106</b>       | DPw2                            | —                    | UCLA-344  | AF517128  | M Tilanus                          |
| DPB1*0202                | DPw2                            | DPB2.2               | QBL, DUCAF, 99101422  | M62329, X72071, AF492642  | M Luo <sup>b</sup>                 |
| DPB1*030101              | DPw3                            | DPB3                 | SLE, PRIESS, ETH9-0226                                      | M62334, X02964, X03023, X78044  |                                    |
| DPB1*030102              | —                               | DPB1*03var           | POHS-161  | AF234538  |                                    |
| DPB1*0401                | DPw4                            | DPB4.1, DPw4a        | HHKB, BOLETH, PRIESS, LC11, KAS011                          | M62326, M23675, K01615, M23906-8, L29174, X03022, X030025-8, X02228, X72072 |                                    |
| DPB1*0402                | DPw4                            | DPB4.2, DPw4b        | APD, BURKHARDT  | M62327, M21886  |                                    |
| DPB1*0501                | DPw5                            | DPB5                 | HAS, LKT3, 99101467   | M62333, X72073, AF492638  | M Luo <sup>b</sup>                 |
| DPB1*0601                | DPw6                            | DPB6                 | JMOS, FB11  | M62335, X72074  |                                    |
| DPB1*0801                | —                               | DPB8                 | PIAZ  | M62331  |                                    |
| DPB1*0901                | —                               | DPB9, DP'Cp63'       | TOKUNAGA, 99100402  | M62341, X72075, AF492637  | M Luo <sup>b</sup>                 |
| DPB1*1001                | —                               | DPB10                | BM21, SAVC, 99101332  | M85223, M62342, X72076, AF492640  | M Luo <sup>b</sup>                 |
| DPB1*110101              | —                               | DPB11                | CRK, AVE G  | M62336, X78046  |                                    |
| DPB1*110102              | —                               | —                    | AH696   | L23399  |                                    |
| DPB1*1301                | —                               | DPB13                | NB, KAS116  | M62337, X72077  |                                    |
| DPB1*1401                | —                               | DPB14                | 8268, KAS011  | M31778, M62343, X72078  |                                    |
| DPB1*1501                | —                               | DPB15                | PLH, 99100835   | M31779, M62339, X72079, AF492636  | M Luo <sup>b</sup>                 |

**Table 7.** *Continued*

| HLA alleles <sup>a</sup> | Associated HLA-DP specificities | Previous equivalents | Individual or cell line from which the sequence was derived | Accession number                 | References or submitting author(s) |
|--------------------------|---------------------------------|----------------------|---|----------------------------------|------------------------------------|
| DPB1*1601                | —                               | DPB16                | JRA, WT46, 99101659   | M31780, M62332, X72080, AF492641 | M Luo <sup>b</sup>                 |
| DPB1*1701                | —                               | DPB17                | JRAB, LBUF, 99101046  | M31781, M62344, X72082, AF492643 | M Luo <sup>b</sup>                 |
| DPB1*1801                | —                               | DPB18                | JCA   | M62340                           |                                    |
| DPB1*1901                | —                               | DPB19                | CB6B, 99101467  | M62330, X72081, AF492639         | M Luo <sup>b</sup>                 |
| DPB1*200101              | —                               | Oos, DPB-JA          | OOS, ARENT, BEL8-CC   | M58608, M63508                   |                                    |
| DPB1*200102              | —                               | DPB1*BRI6            | NT  | M97685                           |                                    |
| DPB1*2101                | —                               | DPB-GM, DPB30, NewD  | GM, PEI52, PEI74, C1, T7527                                 | M77659, M83915, M84621, M80300   |                                    |
| DPB1*2201                | —                               | DPB1*AB1, NewH       | HV152, HV385, SAS60103, SAS60106                            | M77674, M83919                   |                                    |
| DPB1*2301                | —                               | DPB32, NewB          | D0208915, UK3082, UK5496, PT35, IT22, I132                  | M83913, M84014                   |                                    |
| DPB1*2401                | —                               | DPB33, NewC          | UK7430  | M83914                           |                                    |
| DPB1*2501                | —                               | DPB34, NewE          | PEI46   | M83916                           |                                    |
| DPB1*260101              | —                               | DPB31, WA2           | LINE70  | M86229                           |                                    |
| DPB1*260102              | —                               | DPB1*WA8             | 4-BEN NO2   | L24387                           |                                    |
| DPB1*2701                | —                               | DPB23, WA3           | LINE92, H033  | M84619, M86230                   |                                    |
| DPB1*2801                | —                               | DPB21, JAVA2         | I57, I147, JOG1489  | M84617, L00599                   |                                    |
| DPB1*2901                | —                               | DPB27, NewG          | RBLB66, NG105, NG113, PNG112, PNG177, SCZ244                | M84625, M83918, L01467           |                                    |
| DPB1*3001                | —                               | DPB28                | AH1377, EB5, ETH-0245                                       | M84620, X78045                   |                                    |
| DPB1*3101                | —                               | DPB22, NewF, JAVA1   | I68, I147, I6, PEI03, JOG1427, JOG1471                      | M84618, M83917, L00598           |                                    |
| DPB1*3201                | —                               | DPB24, NewI          | NG78, PNG167  | M84622, M85222                   |                                    |
| DPB1*3301                | —                               | DPB25                | HO23  | M84623                           |                                    |
| DPB1*3401                | —                               | DPB26                | HO26, DH67  | M84624                           |                                    |
| DPB1*3501                | —                               | DPB29                | AH1450, AH521   | M84626                           |                                    |
| DPB1*3601                | —                               | New A, SSK2          | SASBE41, THM1, KT   | M83912, D10479, D10882           |                                    |
| DPB1*3701                | —                               | DPB1*WA4             | LINE41  | M87046                           |                                    |
| DPB1*3801                | —                               | SSK1                 | THKK  | D10478                           |                                    |
| DPB1*3901                | —                               | DPB1*BRI4            | EM, ETH-0203  | M97686, X78043                   |                                    |
| DPB1*4001                | —                               | DPB1*BRI5, WA5       | 5D, LINE103, LINE105, LINE116, LINE117, LINE119, EB39, HO62 | M97684, L19219, L23400           |                                    |
| DPB1*4101                | —                               | DPB2.3               | HT  | D13174                           |                                    |
| DPB1*4401                | —                               | STC2                 | SCZ259, SCZ244  | L01466                           |                                    |
| DPB1*4501                | —                               | DPB1*NM              | C212  | L09236                           |                                    |
| DPB1*4601                | —                               | DPB1*NIB             | V.E.C., R130  | L07768, L31817                   |                                    |
| DPB1*4701                | —                               | DPB1*02KY, *SUT      | SAJ008, SAJ119, SUT   | D14344, D10834                   |                                    |
| DPB1*4801                | —                               | —                    | SE107   | L17314                           |                                    |
| DPB1*4901                | —                               | —                    | HO21  | L17313                           |                                    |
| DPB1*5001                | —                               | —                    | DIEDE   | L17311                           |                                    |
| DPB1*5101                | —                               | DPB1*WA7, *EA1, *JYO | C2#3, 15-BEN, NMDP#00800-2553-8, JYO                        | L17310, L19219, L27073, D28809   |                                    |
| DPB1*5201                | —                               | —                    | HO82  | L22076                           |                                    |
| DPB1*5301                | —                               | —                    | EB26  | L22077                           |                                    |

**Table 7.** *Continued*

| HLA alleles <sup>a</sup> | Associated HLA-DP specificities | Previous equivalents | Individual or cell line from which the sequence was derived | Accession number       | References or submitting author(s) |
|--------------------------|---------------------------------|----------------------|---|------------------------|------------------------------------|
| DPB1*5401                | —                               | DPB1 New2            | ETH-0222  | X78042                 |                                    |
| DPB1*5501                | —                               | DPB1 New3, DPBGUY    | ETH-0271, J.M.  | X78041, X80331         |                                    |
| DPB1*5601                | —                               | DPB1-R90             | R90   | L31816                 |                                    |
| DPB1*5701                | —                               | DPBMYT4220           | H.R.  | X80752                 |                                    |
| DPB1*5801                | —                               | DPB1newAW            | HAM006  | X82123, X85966         |                                    |
| DPB1*5901                | —                               | —                    | GA Au, HBO1242, HBO1243, HBO1244, 0000-5922-0               | Z47806, U29534, U59422 |                                    |
| DPB1*6001                | —                               | —                    | JN, BPN   | U22313                 |                                    |
| DPB1*6101N               | Null                            | —                    | ZN, Nel., Nan   | U22312, AJ002530       |                                    |
| DPB1*6201                | —                               | —                    | LE, CT  | U22311                 |                                    |
| DPB1*6301                | —                               | DPB1*lsOr            | lsOr  | U34033                 |                                    |
| DPB1*6401N               | Null                            | DPB1*lsAr            | lsAr  | U34032                 |                                    |
| DPB1*6501                | —                               | —                    | E.L.  | X91886                 |                                    |
| DPB1*6601                | —                               | DPB1*BR              | DNA-128   | X96986                 |                                    |
| DPB1*6701                | —                               | DPB1*TF              | DNA-TF  | X96985                 |                                    |
| DPB1*6801                | —                               | DPB1*BAC             | BAC1283, 902-258-3  | Z70731, U59440         |                                    |
| DPB1*6901                | —                               | —                    | SBD3497   | X97406                 |                                    |
| DPB1*7001                | —                               | —                    | 900-132-2   | U59441                 |                                    |
| DPB1*7101                | —                               | —                    | 905-967-6, I045   | U59438                 |                                    |
| DPB1*7201                | —                               | —                    | 0014-3022-2   | U59439                 |                                    |
| DPB1*7301                | —                               | —                    | 0076-0684-1   | U59437                 |                                    |
| DPB1*7401                | —                               | DPB1-512Id           | 512Id   | U94839                 |                                    |
| DPB1*7501                | —                               | 0402-GA              | U73   | Y09327                 |                                    |
| DPB1*7601                | —                               | DPB1*14new           | 19835   | Z92523                 |                                    |
| DPB1*7701                | —                               | DPBnewBR             | U.R.  | Y14230                 |                                    |
| DPB1*7801                | —                               | DPBNew               | M541  | Y13900                 |                                    |
| DPB1*7901                | —                               | DPB1New              | 1197  | Y16095                 |                                    |
| DPB1*8001                | —                               | DPB1                 | 18055285  | AF074845               |                                    |
| DPB1*8101                | —                               | DPB1*dre             | 009340662, dre  | AF074846, AJ245640     |                                    |
| DPB1*8201                | —                               | DPB1*04New           | 19045   | Y18498                 |                                    |
| DPB1*8301                | —                               | —                    | GM-CV   | AJ238005               |                                    |
| DPB1*8401                | —                               | DPB1*PERR            | CC109   | AF077015               |                                    |
| DPB1*8501                | —                               | DPB1*27New           | MGD, UCLA212  | AF184168, AF211979     |                                    |
| DPB1*8601                | —                               | DP New               | 605861, 606165  | AJ271373               |                                    |
| DPB1*8701                | —                               | DPB1*2001new         | #014738363  | AF288354               |                                    |
| DPB1*8801                | —                               | DPB1*3701new         | #009519430  | AF288355               |                                    |
| DPB1*8901                | —                               | DPB1*MO              | MOP   | AJ297820               |                                    |
| <b>DPB1*9001</b>         | —                               | DPBnew               | 608050  | AJ292074               | (Bengtsson et al., 2002b)          |
| <b>DPB1*9101</b>         | —                               | DP14New              | VTIS20927   | AY029777               | M Varney                           |
| <b>DPB1*9201</b>         | —                               | —                    | VTIA71787   | AF489518               | M Varney                           |

<sup>a</sup> Allele names given in bold type have been assigned since the 2000 Nomenclature report.<sup>b</sup> This reference is to a confirmatory sequence.

**Table 8.** Designations of HLA-DOA, -DOB alleles

| HLA alleles  | Previous equivalents      | Individual or cell line from which the sequence was derived | Accession number         |
|--------------|---------------------------|---|--------------------------|
| DOA*010101   | DZ $\alpha$ , DNA1.2a     | JG, MANN, DBB   | X02882, Z81310, AB005994 |
| DOA*01010201 | plI- $\alpha$ -6, DNA1.1b | SPL, TOK  | M26039, AB005992         |
| DOA*01010202 | PGDZ1, DNA1.1a            | PGF, SA   | M31525, AB005991         |
| DOA*01010203 | DNA1.1c                   | SPO101  | AB005993                 |
| DOA*010103   | DNA1.2b                   | DKB   | AB005995                 |
| DOA*01010401 | DNA1.3a                   | U937  | AB005996                 |
| DOA*01010402 | DNA1.3b                   | U937  | AB005997                 |
| DOA*010105   | DNA1.4                    | COX   | AB005998                 |
| DOB*01010101 | DO, plI-b-9               | 45.1, SPL, SA, LCL721                                       | X03066, M26040, AB035249 |
| DOB*01010102 | —                         | WT100BIS, LCL721  | AB035250                 |
| DOB*010102   | DOB1.6                    | SR117   | AB035254                 |
| DOB*010201   | DOB                       | BOLETH  | L29472                   |
| DOB*010202   | DOB1.3                    | AKIBA   | AB035251                 |
| DOB*0103     | HA14                      | MANN  | X87344                   |
| DOB*01040101 | DOB1.4                    | PEA   | AB035252                 |
| DOB*01040102 | DOB1.5                    | SPO010  | AB035253                 |

**Table 9.** Designations of HLA-DM alleles

| HLA alleles | Previous equivalents | Individual or cell line from which the sequence was derived | Accession number   |
|-------------|----------------------|---|--------------------|
| DMA*0101    | RING6                | JY, MANN  | X62744             |
| DMA*0102    | DMA-Ile 140          | AZL   | Z24753             |
| DMA*0103    | DMA3.2               | HOM-2   | U04878             |
| DMA*0104    | DMA3.4               | BM21  | U04877             |
| DMB*0101    | RING7                | JY, MANN  | Z23139             |
| DMB*0102    | DMB-Glu 143          | YAR   | Z24750             |
| DMB*0103    | DMB-Thr 179          | BM16  | Z24751             |
| DMB*0104    | DMB3.4               | CEPH 23-01  | U00700             |
| DMB*0105    | HY595, DMB*KV1       | HY595, H.S.K.   | D32055, U16762     |
| DMB*0106    | DMB*PERR             | CC44  | AF134890, AF072680 |

**Table 10.** Designations of TAP alleles

| TAP alleles | Previous equivalents  | Individual or cell line from which the sequence was derived | Accession number       |
|-------------|-----------------------|---|------------------------|
| TAP1*0101   | RING4, PSF(Y3), TAP1A | U937, LCL721.45, HB00028, HB00032                           | X57522, X57521, L21204 |
| TAP1*0102N  | TAP1*0101Null         | KMW   | AB012644, AB012645     |
| TAP1*020101 | TAP1B                 | CK  | L21206                 |
| TAP1*020102 | TAP1E                 | HEH   | L21205                 |
| TAP1*0301   | TAP1C                 | JT  | L21208                 |
| TAP1*0401   | TAP1D                 | HB00031   | L21207                 |
| TAP2*0101   | RING11A, TAP2A        | CEM-CCRF  | M84748                 |
| TAP2*0102   | TAP2E                 | JY  | Z22936                 |
| TAP2*0103   | TAP2F                 | S-2   | U07844                 |
| TAP2*0201   | RING11B, TAP2B        | DX3   | Z22935                 |

**Table 11.** Designations of MICA alleles.

| MICA alleles <sup>a</sup> | Previous equivalents  | Individual or cell line from which the sequence was derived  | Accession number   | References or submitting author(s)         |
|---------------------------|---|--|--|--|
| MICA*001                  | MICA001, PERB11.1-18.2, MICA-EIBA   | IMR90, EJ32B, DUCAF, EVA, SP   | L14848, U56940, L29406, U69965, AF085059, AF085060, AF085061, AF085062, AF336085, AF336086   | (Obuchi <i>et al.</i> , 2001) <sup>b</sup> |
| MICA*00201                | MICA002, MICA-BEBF  | YAR, AMAI, WT49, TEM, JBUSH, 9-2, ZR75-1   | U56941, AF085043, AF085044, AF085045, AF085046   |  |
| MICA*00202                | MICA-BEE, MICA042   | Individual1  | AF011877, AF011878, AF011879   |  |
| MICA*004                  | MICA004, MICA-AJCD  | MOU, BM15, PF97387, MANN, RSH, Individual2   | U56943, X92841, AF085031, AF085032, AF085033, AF085034   |  |
| MICA*005                  | MICA005   | U373   | U56944   |  |
| MICA*006                  | MICA006, MICA-ADCD  | KAS116   | U56945, AF085023, AF085024, AF085025, AF085026, AF336065, AF336066   | (Obuchi <i>et al.</i> , 2001) <sup>b</sup> |
| MICA*00701                | MICA007, MICA-CEEA  | JESTHOM, BM92, WT24  | U56946, AF085047, AF085048, AF085049, AF085050   |  |
| MICA*00702                | MICA-CEB, MUC-22, MICA023   | A34, B27-ci, SchS(child1)-MUC  | AF011880, AF011881, AF011882, Y16805   |  |
| MICA*00801                | MICA008, PERB11.1-44.1, PERB11.1-8.1, PERB11.1-60.3, PERB11.1-47.1, MICA-AAAC | SCHU, MGAR, SAVC, LB, JY, R90/7379, REE, GD, EMJ, PLH, DKB, LBF, WT8, APD, MADURA                      | U56947, U69624, U69967, L29409, U69977, U69628, L29411, U69625, U69970, U69976, AF085015, AF085016, AF085017, AF085018, AF336067, AF336068 | (Obuchi <i>et al.</i> , 2001) <sup>b</sup> |
| MICA*00802                | MICA-AAD, MICA-AN23, MUC-26, MICA026, MICA-silent B                           | Individual3, GUA-ND, BrI(f)-MUC, MLA-MUC, BrI(D(child1))-MUC, Thai-DCH019, 01083208, 01065930, 0183074 | AF011883, AF011884, AF011885, AJ250499, AJ250500, Y16809, AF106650, AF106651, AF106652   |  |
| MICA*00803                | MICA-silent C, MICA054  | 01083082   | AF106653, AF106654, AF106655   |  |
| MICA*00901                | MICA009, PERB11.1-52.1, MICA-ABCD   | RML, AKIBA, HARA, BOB, C1R, JHAF, LUY, Individual2, E4181324   | U56948, U69626, U69971, AF085019, AF085020, AF085021, AF085022, AF336069   | (Obuchi <i>et al.</i> , 2001) <sup>b</sup> |
| MICA*00902                | MICA-AFC, MICA-TAND, MICA020, MUC-20  | MANIKA, TAA, AE(F)-MUC, AS(Child2)-MUC, DZA 97-19  | AF011886, AF011887, AF011888, AF097419, AF079420, AF079421, AF079406, Y16803, AF029762, AY029763   | A Kimura <sup>b</sup>                      |
| MICA*010                  | MICA010, PERB11.1-62.1, PERB11.1-46.1, MICA-DGAB, MUC-18                      | AMALA, BOLETH, T7526, BSM, KAS011, TAB089, EM(M)-MUC, EM(Child1)-MUC, EK-MUC, ES-MUC, T7526            | U56949, U69629, U69974, L29408, U69969, AF085055, AF085056, AF085057, AF085058, Y16801, AF336071, AF336072                                 | (Obuchi <i>et al.</i> , 2001) <sup>b</sup> |
| MICA*011                  | MICA011, PERB11.1-65.1, MICA-BCGE   | LWAGS, T47D  | U56950, U69630, U69975, AF085035, AF085036, AF085037, AF085038, AF336073, AF336074   | (Obuchi <i>et al.</i> , 2001) <sup>b</sup> |
| MICA*01201                | MICA012, PERB11.1-54.1  | LKT3, HOKKAIDO, TA94   | U56951, U69627, U69972, AF336081, AF336082   | (Obuchi <i>et al.</i> , 2001) <sup>b</sup> |
| MICA*01202                | MICA-silent A, MICA053  | 01082123   | AF106647, AF106648, AF106649   |  |
| MICA*013                  | MICA013   | PAR1   | U56952   |  |
| MICA*014                  | MICA014   | PAR2   | U56953   |  |
| MICA*015                  | MICA015, MICA-39  | OMW  | U56954, AF136157, AF136158, AF136159, AF264738, AF264739, AF264740   | (Obuchi <i>et al.</i> , 2001) <sup>b</sup> |
| MICA*016                  | MICA016, PERB11.1-35.1, MICA-AGFB, MUC-19                                     | J0528239, FPAF, Q85/8086, NR(M)-MUC, NR(Child1)-MUC, NM(Child2)-MUC, TISI                              | U56955, U69623, U69966, AF085027, AF085028, AF085029, AF085030, Y16802, AF336075, AF336076   | A Kimura <sup>b</sup>                      |

**Table 11.** *Continued*

| MICA alleles <sup>a</sup> | Previous equivalents                               | Individual or cell line from which the sequence was derived   | Accession number   | References or submitting author(s)         |
|---------------------------|--|---|--|--|
| MICA*017                  | MICA-KMCE, MICA017, MUC-27, MICA-AN31              | KSM, DBB, DEU, WJR076, DEM, FD(F)-MUC, FM(child1)-MUC, HF(M)-MUC, HS(child1)-MUC, HT(child2)-MUC, Thai-DCH013, Thai-DCH020, Thai-DCH024 | AF079413, AF079414, AF079415, AF097403, AJ250803, Y16810, AF264735, AF264736, AF264737                                 | (Obuchi <i>et al.</i> , 2001) <sup>b</sup> |
| MICA*018                  | MICA-EEBA, MICA-GKIT, MICA018, MUC-23, MICA-AN22   | 31227ABO, BM16, CBA, DO208915, SE(F)-MUC, KU(F)-MUC, KF(child1)-MUC, Thai-DCH036, DZA 97-8, DZA 97-18, DZA 97-20, BM16, DO208915        | AF011874, AF011875, AF011876, AF093116, AF079425, AF079426, AF079427, AF097404, Y16806, AJ250805, AF336077             | (Obuchi <i>et al.</i> , 2001) <sup>b</sup> |
| MICA*019                  | MICA-AMW, MICA-AGAB, MICA-DPCA, MICA019, MICA-AN26 | SSA, HSB27, OLL, WEWAK1, DPCA, CF996, DHIF, WT51  | AB015600, AF011835, AF011836, AF011837, AF093113, AF079416, AF079417, AF079418, AF097405, AJ250804, AF336079, AF336080 | (Obuchi <i>et al.</i> , 2001) <sup>b</sup> |
| MICA*020                  | MICA-AN33  | 25/1506   | AJ249394   |  |
| MICA*021                  | MUC-17, MICA021                                    | AA-MUC, AM(child1)-MUC, AS(child2)-MUC  | Y18110   |  |
| MICA*022                  | MICA-BGA, MUC-21, MICA022                          | Individual10, Thai-DCH021   | AF011856, AF011857, AF011858, Y16804   |  |
| MICA*023                  | MICA-BEBC  | WDV   | AF085039, AF085040, AF085041, AF085042   |  |
| MICA*024                  | MICA-AAC, MUC-24, MICA024                          | BT594, Individual7, DZA 97-17   | AF011832, AF011833, AF011834, Y16807   |  |
| MICA*025                  | MICA-DEB, MUC-25, MICA025                          | BT20, Thai-DCH032   | AF011853, AF011854, AF011855, Y16808   |  |
| MICA*026                  | MICA-CEED  | HOM-2   | AF085051, AF085052, AF085053, AF085054   |  |
| MICA*027                  | MICA-AAAB, MICA-AN21                               | SWEIG007, HSB27   | AF085011, AF085012, AF085013, AF085014, AJ250802   |  |
| MICA*028                  | MICA-AABC, MUC-29, MICA028                         | DKB, KUR-MUC  | AF011829, AF011830, AF011831, AF093115, Y18111   |  |
| MICA*029                  | MUC-30, MICA-AN27, MICA029                         | DZA 97-08, MFO-ND   | Y18112, AJ250503, AJ250504   |  |
| MICA*030                  | MICA-KWHT, MICA036                                 | WKD   | AF079422, AF079423, AF079424   |  |
| MICA*031                  | MICA-AIB, MICA037                                  | MCF7  | AF011838, AF011839, AF011840   |  |
| MICA*032                  | MICA-AKB, MICA038                                  | CAR, NS2TA, NS2TA1, S2T2  | AF011841, AF011842, AF011843   |  |
| MICA*033                  | MICA-ALAB, MICA039, MICA-AN24                      | WEWAK1  | AF011844, AF011845, AF011846, AF093114, AJ250505   |  |
| MICA*034                  | MICA-BCC, MICA040                                  | Individual18  | AF011847, AF011848, AF011849   |  |
| MICA*035                  | MICA-BEA, MICA041                                  | SK-BR3  | AF011850, AF011851, AF011852   |  |
| MICA*036                  | MICA-BHB, MICA043                                  | EHM   | AF011859, AF011860, AF011861   |  |
| MICA*037                  | MICA-CEA, MICA044                                  | AVE G, GRE G, LS40, LH, IHL, AD031, Individual10, B7Qui, 8TB  | AF011862, AF011863, AF011864   |  |
| MICA*038                  | MICA-CEC, MICA045                                  | Individual12, Individual14  | AF011865, AF011866, AF011867   |  |
| MICA*039                  | MICA-CEF, MICA046                                  | Individual13  | AF011868, AF011869, AF011870   |  |
| MICA*040                  | MICA-CIB, MICA047                                  | A34   | AF011871, AF011872, AF011873   |  |
| MICA*041                  | MICA-AN25, MICA048, MICA-newA                      | M7, 01083098, 01083208, 01081318, 01065894  | AJ271789, AF106632, AF106633, AF106634   |  |
| MICA*042                  | MICA-newB, MICA049                                 | 01065869  | AF106635, AF106636, AF106637   |  |
| MICA*043                  | MICA-AN32, MICA050, MICA-newC                      | RB22, 01084383  | AJ250990, AJ250991, AF106638, AF106639, AF106640   |  |
| MICA*044                  | MICA-newD, MICA051                                 | 01083114  | AF106641, AF106642, AF106643   |  |

**Table 11.** *Continued*

| MICA alleles <sup>a</sup> | Previous equivalents            | Individual or cell line from which the sequence was derived | Accession number                                    | References or submitting author(s)                 |
|---------------------------|---------------------------------|---|---|--|
| MICA*045                  | MICA-AN30, MICA052<br>MICA-newE | DEW-ND, 01083268, 01065876                                  | AJ250506, AJ250507, AF106644, AF106645,<br>AF106646 |  |
| MICA*046                  | MICA-AN28                       | M7  | AJ250501, AJ250502                                  |  |
| <b>MICA*047</b>           | MICA-055D                       | COYA3408, KM  | AJ295250, AJ295251, AF286732                        | (Pérez-Rodríguez et al., 2002; Zhang et al., 2002) |
| <b>MICA*048</b>           | —                               | TA21  | AF264741, AF264742, AF264743                        | (Obuchi et al., 2001)                              |
| <b>MICA*049</b>           | —                               | LUY   | AF264744, AF264746, AF264747                        | (Obuchi et al., 2001)                              |

<sup>a</sup> Allele names given in bold type have been assigned since the 2000 Nomenclature report.

<sup>b</sup> This reference is to a confirmatory sequence.

**Table 12.** Numbers of alleles with official names at each locus by 31st July 2002

| Locus    | Number of alleles |
|----------|-------------------|
| HLA-A    | 250               |
| HLA-B    | 490               |
| HLA-C    | 119               |
| HLA-E    | 6                 |
| HLA-F    | 1                 |
| HLA-G    | 15                |
| HLA-DRA  | 3                 |
| HLA-DRB1 | 315               |
| HLA-DRB2 | 1                 |
| HLA-DRB3 | 38                |
| HLA-DRB4 | 12                |
| HLA-DRB5 | 15                |
| HLA-DRB6 | 3                 |
| HLA-DRB7 | 2                 |
| HLA-DRB8 | 1                 |
| HLA-DRB9 | 1                 |
| HLA-DQA1 | 22                |
| HLA-DQB1 | 53                |
| HLA-DPA1 | 20                |
| HLA-DPB1 | 99                |
| HLA-DOA  | 8                 |
| HLA-DOB  | 8                 |
| HLA-DMA  | 4                 |
| HLA-DMB  | 6                 |
| TAP1     | 6                 |
| TAP2     | 4                 |
| MICA     | 54                |

**Table 13.** List of allele names which have been deleted

| Old name now deleted | New name       | Reason for change                       |
|----------------------|----------------|---|
| A*0105 N             | A*0104 N       | Sequence shown to be in error           |
| A*0223               | A*0222         | Sequence named in error                 |
| A*2401               | —              | Sequence shown to be in error           |
| A*2412               | A*2408         | Sequence shown to be in error           |
| A*2416               | A*3108         | Sequence renamed                        |
| A*3005               | A*3004         | Sequence shown to be in error           |
| A*31011              | A*310102       | Sequence shown to be in error           |
| A*3302               | A*3303         | Sequence shown to be in error           |
| B*0701               | —              | Sequence shown to be in error           |
| B*1305               | B*1304         | Sequence submitted with errors          |
| B*1522               | B*3543         | Sequence renamed                        |
| B*1541               | B*1539         | Sequence named in error                 |
| B*1559               | B*3544         | Sequence renamed                        |
| B*1816               | B*1814         | Sequence named in error                 |
| B*27051              | B*270502       | Sequence shown to be in error           |
| B*2722               | B*2706         | Sequence shown to be in error           |
| B*39012              | B*390101       | Sequence shown to be in error           |
| B*3921               | B*3924         | Sequence submitted with errors          |
| B*4017               | B*4016         | Sequence named in error                 |
| B*4041               | B*4040         | Sequence named in error                 |
| B*4203               | B*4202         | Name never officially assigned          |
| B*4401               | B*4402         | Sequence shown to be in error           |
| B*5003               | B*5002         | Sequence named in error                 |
| B*5125               | B*5122         | Sequence named in error                 |
| B*5506               | B*5504         | Sequence submitted with errors          |
| B*5803               | —              | Name never officially assigned          |
| B*7901               | B*1518         | Sequence renamed                        |
| Cw*0101              | Cw*0102        | Sequence shown to be in error           |
| Cw*0201              | Cw*020202      | Sequence shown to be in error           |
| Cw*0301              | Cw*0304        | Sequence shown to be in error           |
| Cw*0402              | Cw*040101      | Sequence shown to be in error           |
| Cw*0601              | Cw*0602        | Sequence shown to be in error           |
| Cw*1101              | —              | Sequencing artefact                     |
| Cw*1201              | Cw*120202      | Sequence shown to be in error           |
| Cw*1301              | —              | Sequence shown to be in error           |
| Cw*1401              | Cw*1402        | Sequence shown to be in error           |
| Cw*1501              | Cw*1502        | Sequence shown to be in error           |
| Cw*1603              | Cw*1403        | Sequence shown to be in error           |
| Cw*16042             | Cw*160401      | Sequence submitted with errors          |
| Cw*1605              | Cw*160401      | Sequence submitted with errors          |
| DRB1*0702            | DRB1*0701      | Sequence shown to be in error           |
| DRB1*08031           | DRB1*080302    | Sequence shown to be in error           |
| DRB1*09011           | DRB1*090102    | Sequence shown to be in error           |
| DRB1*12031           | DRB1*1201      | Sequence shown to be in error           |
| DRB1*1606            | DRB1*1605      | Sequence shown to be in error           |
| DRB4*0101102N        | DRB4*01030102N | Sequence named in error                 |
| DRB5*0201            | DRB5*0202      | Sequence shown to be in error           |
| DQA1*03012           | DQA1*0302      | Sequence shown to be in error           |
| DQA1*05013           | DQA1*0505      | Additional coding polymorphism detected |
| DQB1*03031           | DQB1*030302    | Sequence shown to be in error           |
| DPA1*0101            | DPA1*0103      | Sequence shown to be in error           |
| DPA1*0102            | DPA1*0103      | Sequence shown to be in error           |
| DPB1*02011           | DPB1*020102    | Sequence shown to be in error           |
| DPB1*0701            | —              | Name never assigned                     |
| DPB1*1201            | —              | Name never assigned                     |
| DPB1*4201            | DPB1*3101      | Sequence shown to be in error           |
| DPB1*4301            | DPB1*2801      | Sequence shown to be in error           |
| MICA*003             | —              | Name never assigned                     |

