NEW ALLELE

Alerts

CONTRIBUTIONS TO THIS SECTION WILL NOT UNDERGO PEER REVIEW, BUT WILL BE REVIEWED BY THE NOMENCLATURE EDITOR

A new HLA-B*35 allele, B*3589, detected in a Malaysian individual

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Key words: B*3589; human leukocyte antigen; new allele

A novel human leukocyte antigen-B allele officially named B*3589, was found in an indigenous individual of Jehai ethnicity when sequencing was performed to investigate human genome variation in a research project. B*3589 differs form B*3505 in a point mutation at codon 169 (CGC to TGC) resulting in an amino acid change from Arg to Cys.

This new allele was detected in one normal, healthy individual using sequence-based typing during investigations of genetic diversity and human migration in indigenous Malaysian populations. The individual belonged to group called Jehai, a subgroup of the Negrito, an indigenous group native to Peninsular Malaysia with Austrolo-Melanesian physical features. This individual speaks Jehai, which stems from the Austroasiatic language family. Recent

studies have indicated that people of this community are the descendants of the earliest people who migrated into Asia from Africa (1).

The novel B*35 allele was closest to the B*3505 allele, which was present at 15% in the Jehai population. They differ at nucleotide position 577, at codon 169 of exon 3 (CGC→TGC), resulting in an amino acid change from arginine to cystine (Arg→Cys) (Figure 1). The exon 3 sequence of the new allele has been submitted to GenBank with the accession number EU589203.

This new allele has been designated as B*3589 by the WHO Nomenclature Committee in April 2008 (2). This follows the agreed policy that, subject to the conditions stated in the most recent Nomenclature Report (3), names will be assigned to new sequences as they are identified. Lists of such new names will be published in the following WHO Nomenclature report.

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B*3589										-
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B*3589										
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B*3505	CAG ATC AC		AG TGG GAG	GCG GCC CGT						7
B*3589						:				_
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	110	120	130	140	150	160	170	180	190	200
B*3505	CDLGPDGRLL	RGHDQSAYDG	KDYIALNEDL	SSWTAADTAA	QITQRKWEAA	RVAEQLRAYL	EGLCVEWLRR	YLENGKETLQ	RADPPKTHVT	HHPVSDHEAT
B*3589							C-		******	******

Figure 1 Exon 3 sequence alignment between HLA-B*3589 and B*3505. Dashes indicate identity while asterisks indicate unknown sequences. Numbers above the nucleotide and amino acid sequences represent codon position and amino acid order respectively. (A) Codon 169 shows nucleotide change from C to T. (B) Amino acid position 169 shows change from Arginine (R) to Cysteine (C).

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