

Some observations on HLA-A*26:08 and its specificity



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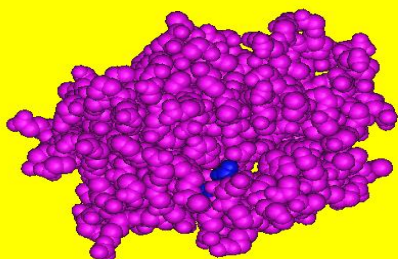


Introduction

HLA-A*26:08 was originally described in January 1996 and is now one of the 104 HLA-A*26 family alleles.

A*26:08 differs from A*26:01:01 by two bases in exon 3, resulting in an amino acid change of W156Q.

Position 156 - in blue - seen from the top of the HLA molecule



The A*26:08 specificity is officially described as “short A26, similar to A*26:03; normal A26”.

During recent work on two novel A*26 alleles we considered A*26:08's prevalence, its likely bearing haplotypes and its serology.

Frequency of A*26:08

Analysis of 3,558 random contiguous, largely UK European, blood donors HLA typed by SBT identified two A*26 alleles only: A*26:01 (carriage frequency (cf) 4.525%, allele frequency (af) 0.02991 and A*26:08 (cf 0.084%, af 0.00042).

A*26:08 bearing haplotypes

Analysis of 76 unrelated blood donors PCR-SSP/SBT assigned as A*26:08 or A*26:08/48 suggested three A*26:08 bearing haplotypes:

- B*15, C*04, DRB1*07, DQB1*02
- B*15, C*03, DRB1*14, DQB1*05
- B*51, C*15, DRB1*01, DQB1*05

Serology

Serological characterisation of the A*26:08 specificity used 5 A*26:08 subjects, 8 A*26:01 control donors and 18 well-documented local antisera and 16 monoclonal antibodies (One Lambda) reacting with various combinations of the HLA-A10-split specificities and HLA-A43.

The A*26:08 specificity clearly reacted as a HLA-A26.

However, one polyclonal antiserum (strong 'clean' anti-A25, A26, weaker A66, was consistently negative with A*26:08.

Similarly, two others (anti-A19, A10 and anti-A10) gave appreciably weaker reactions with A*26:08 compared to A*26:01.

Inspection of Class I amino acid sequences

This identified 9 motifs possessing 156W (the A*26:08 specificity has 156Q), which could be important for the serological reactivity of the HLA-A10-split specificities (5 of these 9 motifs complied with the single/two patch concept (*Hum Immunol* 2006: **67**: 847).

Motif	Main specificities possessing motif
114Q 156W	A25 A26 A34 A43 A66
151H 152E 156W	A25 A26 A34 A43 A66
62R 114Q 156W	A25 A26 A34 A66
156W 163R	A25 A26 A43 A66
156W 163R 166E	A25 A26 A43 A66
156W 163R 167W	A25 A26 A43 A66
62R 156W 163R	A25 A26 A66
76A 156W	A26 A43
76A 114Q 156W	A26 A43

It seems likely that antibodies against epitopes containing one or more of these 9 motifs and central to an antiserum's specificity, would result in 'weak' or non-reactivity with the A*26:08 product.