Epitopes of human leukocyte antigen class I antibodies found in sera of normal healthy males and cord blood.


El-Awar N, Terasaki PI, Nguyen A, Sasaki N, Morales-Buenrostro LE, Saji H, Maruya E, Poli F.

One Lambda, Inc., Canoga Park, CA 90064, USA. nelawar@onelambda.com

**Abstract**

This study defines 96 epitopes targeted by human leukocyte antigen (HLA) antibodies reported in the sera of normal healthy males with no history of deliberate alloimmunizations and in cord blood. These epitopes are accessible for antibody binding on either the intact or the dissociated forms of recombinant HLA class I single antigens. Sixty percent of the epitopes are accessible on dissociated antigens, are defined mostly by hidden amino acids, and are designated as cryptic epitopes. All 96 epitopes are located exclusively on A-, B-, or C-locus antigens except for one interlocus epitope. All sera in this study were tested in parallel, using single antigen beads that bear either intact or dissociated HLA antigens and antibodies with nearly identical specificities were identified in all tested sera. Because the specificities of these naturally occurring antibodies are unavoidably detected when testing for specificities of alloantibodies, it may be necessary to clearly differentiate the two forms of antibody. To date, the relevance of these antibodies in transplantation is unknown, but even if they are determined to be irrelevant to graft rejection, awareness of the newly identified epitopes could prove useful in avoiding the unnecessary exclusion of potential transplant donors.