10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

HLA-DRB3 antibody - C-terminal region

Rabbit Polyclonal Antibody
Catalog # AI14973

Product Information

Application	WB
Primary Accession	P13762
Other Accession	NM_022555, NP_072049
Reactivity	Human, Pig
Predicted	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	29941

Additional Information

Gene ID	3126
Alias Symbol	HLA-DR3B, HLA-DR52, HLA-DRB1, MGC117330
Other Names	HLA class II histocompatibility antigen, DR beta 4 chain, MHC class II antigen DRB4, HLA-DRB4
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-HLA-DRB3 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	HLA-DRB3 antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HLA-DRB4
Function	Binds peptides derived from antigens that access the endocytic route of antigen presenting cells (APC) and presents them on the cell surface for recognition by the CD4 T-cells. The peptide binding cleft accommodates peptides of 10-30 residues. The peptides presented by MHC class II molecules are generated mostly by degradation of proteins that access the endocytic route, where they are processed by lysosomal proteases and other hydrolases. Exogenous antigens that have been endocytosed by the APC are thus readily available for presentation via MHC II molecules, and for this reason this antigen presentation pathway is usually referred to as exogenous. As membrane proteins on their way to degradation in lysosomes as part of

their normal turn-over are also contained in the endosomal/lysosomal compartments, exogenous antigens must compete with those derived from endogenous components. Autophagy is also a source of endogenous peptides, autophagosomes constitutively fuse with MHC class II loading compartments. In addition to APCs, other cells of the gastrointestinal tract, such as epithelial cells, express MHC class II molecules and CD74 and act as APCs, which is an unusual trait of the GI tract. To produce a MHC class II molecule that presents an antigen, three MHC class II molecules (heterodimers of an alpha and a beta chain) associate with a CD74 trimer in the ER to form a heterononamer. Soon after the entry of this complex into the endosomal/lysosomal system where antigen processing occurs, CD74 undergoes a sequential degradation by various proteases, including CTSS and CTSL, leaving a small fragment termed CLIP (class-II-associated invariant chain peptide). The removal of CLIP is facilitated by HLA-DM via direct binding to the alpha-beta-CLIP complex so that CLIP is released. HLA-DM stabilizes MHC class II molecules until primary high affinity antigenic peptides are bound. The MHC II molecule bound to a peptide is then transported to the cell membrane surface. In B-cells, the interaction between HLA-DM and MHC class II molecules is regulated by HLA-DO. Primary dendritic cells (DCs) also to express HLA-DO. Lysosomal microenvironment has been implicated in the regulation of antigen loading into MHC II molecules, increased acidification produces increased proteolysis and efficient peptide loading.

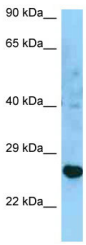
Cellular Location

Cell membrane; Single-pass type I membrane protein. Endoplasmic reticulum membrane; Single-pass type I membrane protein. Golgi apparatus, trans-Golgi network membrane; Single-pass type I membrane protein. Endosome membrane; Single-pass type I membrane protein. Lysosome membrane; Single-pass type I membrane protein. Late endosome membrane; Single-pass type I membrane protein. Note=The MHC class II complex transits through a number of intracellular compartments in the endocytic pathway until it reaches the cell membrane for antigen presentation

References

Young J.A.T.,et al.Proc. Natl. Acad. Sci. U.S.A. 84:4929-4933(1987).
De Pablo R.,et al.Tissue Antigens 59:44-46(2002).
Song C.-H.,et al.Submitted (OCT-2005) to the EMBL/GenBank/DDBJ databases.
Wallace L.T.,et al.Submitted (SEP-2009) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).

Images



WB Suggested Anti-HLA-DRB3 Antibody Titration: 1.0 µg/ml
Positive Control: U937 Whole Cell