

HLA-DRB**Mouse Monoclonal antibody(Mab)****Catalog # AD80380****Specification**

HLA-DRB - Product info

Application

Primary Accession

Reactivity

Host

Clonality

Calculated MW

IHC-P**[P01911](#)****Human****Mouse****Monoclonal****29966****HLA-DRB - Additional info**

Gene ID

3123

Gene Name

HLA-DRB1**Other Names**

HLA class II histocompatibility antigen, DRB1 beta chain, Human leukocyte antigen DRB1,

HLA-DRB1, HLA-DRB1 (<a

href="http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=4948"

target="_blank">HGNC:4948)

Dilution

IHC-P~~Ready-to-use

Storage

Maintain refrigerated at 2-8°C

Precautions

**HLA-DRB Antibody is for research use only
and not for use in diagnostic or
therapeutic procedures.****HLA-DRB - Protein Information****Name** HLA-DRB1 ([HGNC:4948](#))

Synonyms

Function

HLA-DRB2**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

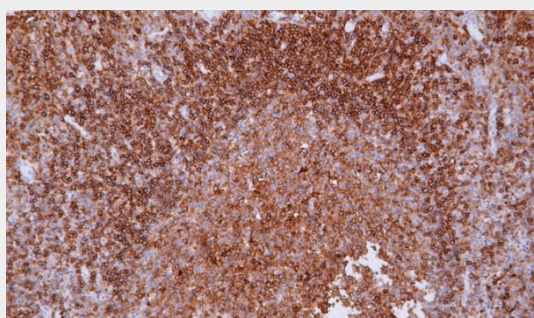
membrane protein. Late endosome membrane; Single-pass type I membrane protein. Note=The MHC class II complex transits through a number of intracellular compartments in the endocytic pathway until it reaches the cell membrane for antigen presentation

HLA-DRB - Protocols

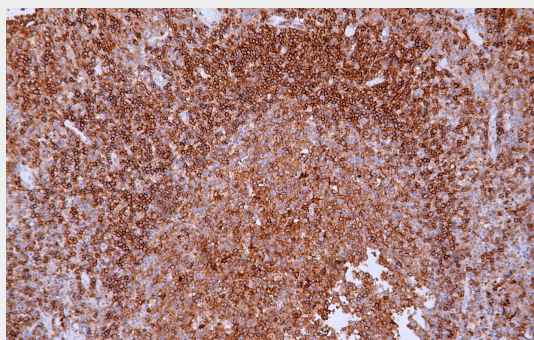
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

HLA-DRB - Images



Tonsil



Immunohistochemical analysis of paraffin-embedded human tonsil tissue using AD80380 performed on the Abcarta® FAIP-30 Fully automated IHC platform. Tissue was fixed with formaldehyde at room temperature, antigen retrieval was by heat mediation with a Citrate buffer (pH6.0). Samples were incubated with primary antibody (Ready-to-use) for 15 min at room temperature. AmpSee™ Detection Systems [Abcepta:AR005] was used as the secondary antibody.