

**HLA-DRA Antibody**  
Rabbit mAb  
Catalog # AP90710

## Specification

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### HLA-DRA Antibody - Product Information

Application **WB, IHC, FC, ICC**  
Primary Accession [P01903](#)  
Clonality **Monoclonal**

#### Other Names

HLA-DR; MLRW; HLA-DRA1; MHC class II antigen DRA; HLA class II histocompatibility antigen, DR alpha chain; HLA DRB1; DRA;

Isotype **Rabbit IgG**  
Host **Rabbit**  
Calculated MW **28621 Da**

### HLA-DRA Antibody - Additional Information

Dilution **WB~~1:1000**  
**IHC~~1:100~500**  
**FC~~1:10~50**  
**ICC~~N/A**

Purification **Affinity-chromatography**  
Immunogen **A synthesized peptide derived from human HLA-DRA**

Description **HLA-DRA is one of the HLA class II alpha chain paralogues. This class II molecule is a heterodimer consisting of an alpha and a beta chain, both anchored in the membrane. It plays a central role in the immune system by presenting peptides derived from extracellular proteins. Class II molecules are expressed in antigen presenting cells (APC: B lymphocytes, dendritic cells, macrophages).**

Storage Condition and Buffer **Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.**

### HLA-DRA Antibody - Protein Information

**Name** HLA-DRA

**Synonyms** HLA-DRA1

**Function**

An alpha chain of antigen-presenting major histocompatibility complex class II (MHCII) molecule. In complex with the beta chain HLA- DRB, displays antigenic peptides on professional antigen presenting cells (APCs) for recognition by alpha-beta T cell receptor (TCR) on HLA-DR-restricted CD4-positive T cells. This guides antigen-specific T- helper effector functions, both antibody-mediated immune response and macrophage activation, to ultimately eliminate the infectious agents and transformed cells (PubMed:<a href="http://www.uniprot.org/citations/15265931" target="\_blank">15265931</a>, PubMed:<a href="http://www.uniprot.org/citations/15322540" target="\_blank">15322540</a>, PubMed:<a href="http://www.uniprot.org/citations/17334368" target="\_blank">17334368</a>, PubMed:<a href="http://www.uniprot.org/citations/22327072" target="\_blank">22327072</a>, PubMed:<a href="http://www.uniprot.org/citations/24190431" target="\_blank">24190431</a>, PubMed:<a href="http://www.uniprot.org/citations/27591323" target="\_blank">27591323</a>, PubMed:<a href="http://www.uniprot.org/citations/29884618" target="\_blank">29884618</a>, PubMed:<a href="http://www.uniprot.org/citations/31495665" target="\_blank">31495665</a>, PubMed:<a href="http://www.uniprot.org/citations/8145819" target="\_blank">8145819</a>, PubMed:<a href="http://www.uniprot.org/citations/9075930" target="\_blank">9075930</a>). Typically presents extracellular peptide antigens of 10 to 30 amino acids that arise from proteolysis of endocytosed antigens in lysosomes (PubMed:<a href="http://www.uniprot.org/citations/8145819" target="\_blank">8145819</a>). In the tumor microenvironment, presents antigenic peptides that are primarily generated in tumor-resident APCs likely via phagocytosis of apoptotic tumor cells or macropinocytosis of secreted tumor proteins (PubMed:<a href="http://www.uniprot.org/citations/31495665" target="\_blank">31495665</a>). Presents peptides derived from intracellular proteins that are trapped in autolysosomes after macroautophagy, a mechanism especially relevant for T cell selection in the thymus and central immune tolerance (PubMed:<a href="http://www.uniprot.org/citations/17182262" target="\_blank">17182262</a>, PubMed:<a href="http://www.uniprot.org/citations/23783831" target="\_blank">23783831</a>). The selection of the immunodominant epitopes follows two processing modes: 'bind first, cut/trim later' for pathogen-derived antigenic peptides and 'cut first, bind later' for autoantigens/self- peptides (PubMed:<a href="http://www.uniprot.org/citations/25413013" target="\_blank">25413013</a>). The anchor residue at position 1 of the peptide N-terminus, usually a large hydrophobic residue, is essential for high affinity interaction with MHCII molecules (PubMed:<a href="http://www.uniprot.org/citations/8145819" target="\_blank">8145819</a>).

### Cellular Location

Cell membrane; Single-pass type I membrane protein. Endoplasmic reticulum membrane; Single-pass type I membrane protein. Early endosome membrane; Single-pass type I membrane protein. Late endosome membrane; Single-pass type I membrane protein. Lysosome membrane; Single-pass type I membrane protein. Autolysosome membrane; Single-pass type I membrane protein. Note=The MHCII complex transits through a number of intracellular compartments in the endocytic pathway until it reaches the cell membrane for antigen presentation (PubMed:18305173, PubMed:9075930). Component of immunological synapses at the interface between T cell and APC (PubMed:15322540, PubMed:29884618).

### Tissue Location

Expressed in professional APCs: macrophages, dendritic cells and B cells (at protein level) (PubMed:15322540, PubMed:23783831, PubMed:31495665). Expressed in thymic epithelial cells (at protein level) (PubMed:23783831).

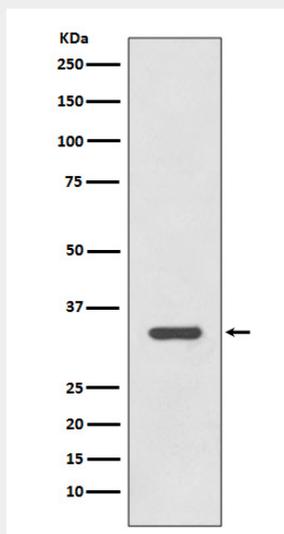
### HLA-DRA Antibody - Protocols

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-DRA Antibody - Images



Western blot analysis of HLA-DRA expression in Raji cell lysate.