

**HLA-DRA (MHC II) Antibody - With BSA and Azide**  
**Mouse Monoclonal Antibody [Clone 169-1B5.2 ]**  
**Catalog # AH11431**

**Specification**

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**HLA-DRA (MHC II) Antibody - With BSA and Azide - Product Information**

Application	IF, FC
Primary Accession	<a href="#">P01903</a>
Other Accession	<a href="#">3122</a> , <a href="#">520048</a>
Reactivity	Human, Bovine, Cat
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG2b, kappa
Calculated MW	36kDa ( $\alpha$ chain) and 27kDa ( $\beta$ chain) KDa

**HLA-DRA (MHC II) Antibody - With BSA and Azide - Additional Information**

**Gene ID** 3122

**Other Names**

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

**Application Note**

IF ~ 1:50 ~ 200  
FC ~ 1:10 ~ 50

**Storage**

Store at 2 to 8°C. Antibody is stable for 24 months.

**Precautions**

HLA-DRA (MHC II) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

**HLA-DRA (MHC II) Antibody - With BSA and Azide - 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: [15265931](http://www.uniprot.org/citations/15265931), PubMed: [15265931](#))

<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 (MHC II) Antibody - With BSA and Azide - 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 (MHC II) Antibody - With BSA and Azide - Images

### **HLA-DRA (MHC II) Antibody - With BSA and Azide - Background**

This antibody detects a monomorphic general framework determinant of HLA-DR Class II antigen. It does not cross react with HLA-DP and HLA-DQ. HLA-DR is a heterodimeric cell surface glycoprotein comprised of a 36kDa alpha (heavy) chain and a 28kDa beta (light) chain. It is expressed on B-cells, activated T-cells, monocytes/macrophages, dendritic cells and other non-professional APCs. In conjunction with the CD3/TCR complex and CD4 molecules, HLA-DR is critical for efficient peptide presentation to CD4+ T cells. It is an excellent histiocytic marker in paraffin sections producing intense cytoplasmic staining. True histiocytic neoplasms are similarly positive. HLA-DR antigens also occur on a variety of epithelial cells and their corresponding neoplastic counterparts.

### **HLA-DRA (MHC II) Antibody - With BSA and Azide - References**

Vaughan J. et al. (1982): Proceedings of the second Asia and Oceania histocompatibility workshop conference. Melbourne. p221. | Kuramochi T. et al. (1987): Cross-reactivity between human and feline Ia antigens, using a monoclonal antibody HLA-D.m1. Amer. J. Vet. Res. 48:186-188