

HLA-DRA Antibody (N-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6799A

Specification

HLA-DRA Antibody (N-term) - Product Information

Application	WB, IHC-P, FC,E
Primary Accession	P01903
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	48-75

HLA-DRA Antibody (N-term) - Additional Information

Gene ID 3122

Other Names

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

Target/Specificity

This HLA-DRA antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 48-75 amino acids from the N-terminal region of human HLA-DRA.

Dilution

WB~~1:1000
IHC-P~~1:50~100
FC~~1:10~50

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

HLA-DRA Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

HLA-DRA Antibody (N-term) - 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](#), PubMed:[15322540](#), PubMed:[17334368](#), PubMed:[22327072](#), PubMed:[24190431](#), PubMed:[27591323](#), PubMed:[29884618](#), PubMed:[31495665](#), PubMed:[8145819](#), PubMed:[9075930](#)). Typically presents extracellular peptide antigens of 10 to 30 amino acids that arise from proteolysis of endocytosed antigens in lysosomes (PubMed:[8145819](#)). 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:[31495665](#)). 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:[17182262](#), PubMed:[23783831](#)). 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:[25413013](#)). 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:[8145819](#)).

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](#)).

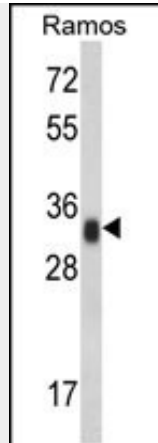
HLA-DRA Antibody (N-term) - Protocols

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

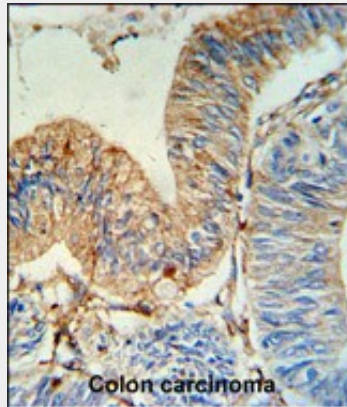
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

HLA-DRA Antibody (N-term) - Images

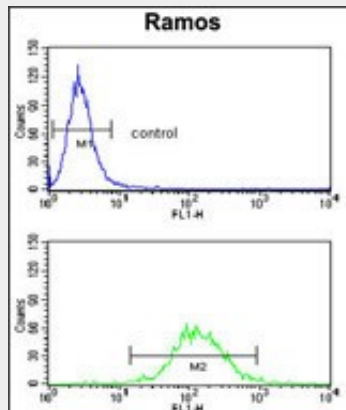




Western blot analysis of HLA-DRA Antibody (N-term) (Cat. #AP6799a) in Ramos cell line lysates (35ug/lane). HLA-DRA (arrow) was detected using the purified Pab.



HLA-DRA Antibody (N-term) (Cat. #AP6799a) IHC analysis in formalin fixed and paraffin embedded human colon carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the HLA-DRA Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.



HLA-DRA Antibody (N-term) (Cat. #AP6799a) flow cytometry analysis of Ramos cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

HLA-DRA Antibody (N-term) - Background

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).

HLA-DRA Antibody (N-term) - References

De Jager, et.al., Nat. Genet. 41 (7), 776-782 (2009)