

# HLA-DR

Mouse Monoclonal antibody(Mab)  
Catalog # AD80254

## Product Information

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<b>Application</b>	IHC-P
<b>Primary Accession</b>	<a href="#">P01903</a>
<b>Reactivity</b>	Human
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Clone Names</b>	254E3G8
<b>Calculated MW</b>	28621

## Additional Information

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<b>Gene ID</b>	3122
<b>Gene Name</b>	HLA-DRA
<b>Other Names</b>	HLA class II histocompatibility antigen, DR alpha chain, MHC class II antigen DRA, HLA-DRA, HLA-DRA1
<b>Dilution</b>	IHC-P~~Ready-to-use
<b>Storage</b>	Maintain refrigerated at 2-8°C.
<b>Precautions</b>	HLA-DR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	HLA-DRA
<b>Synonyms</b>	HLA-DRA1
<b>Function</b>	<p>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="#">15265931</a>, PubMed:<a href="#">15322540</a>, PubMed:<a href="#">17334368</a>, PubMed:<a href="#">22327072</a>, PubMed:<a href="#">24190431</a>, PubMed:<a href="#">27591323</a>, PubMed:<a href="#">29884618</a>, PubMed:<a href="#">31495665</a>, PubMed:<a href="#">8145819</a>, PubMed:<a href="#">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="#">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</p>

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

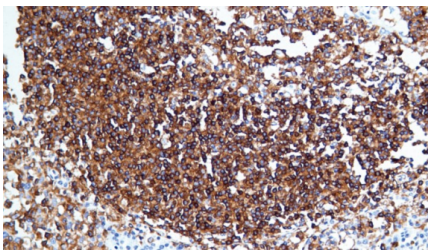
Cell membrane; Single-pass type I membrane protein. Endoplasmic reticulum membrane; Single-pass type I membrane protein. Early endosome membrane; Single-pass type I membrane protein. Late endosome membrane; Single-pass type I membrane protein. Lysosome membrane; Single-pass type I membrane protein. Autolysosome 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).

#### Images

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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.