HLA-DRA Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	HLA-DRA, Polyclonal Antibody
Full Product Name	HLA-DRA Polyclonal Antibody
Product Gene Name	anti-HLA-DRA antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse
Form/Format	PBS with 0.02% sodium azide, 50% glycerol, pH 7.3.
Purity/Purification	Affinity Purification
Preparation and Storage	Store at -20 degree C. Avoid freeze/thaw cycles.
Molecular Weight	28kDa
OMIM	gene 610424
3D Structure	ModBase 3D Structure for P01903
Immunogen	Recombinant protein of human HLA-DRA (NP_061984.2).
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-HLA-DRA antibody	Western Blot (WB), Immunofluorescence (IF)
Application Notes for anti-HLA-DRA antibody	WB: 1:500-1:2000 IF: 1:50-1:200
Related Product Information for anti-HLA-DRA antibody	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). The alpha chain is approximately 33-35 kDa and its gene contains 5 exons. Exon 1 encodes the leader peptide, exons 2 and 3 encode the two extracellular domains, and exon 4 encodes the transmembrane domain and the cytoplasmic tail. DRA does not have polymorphisms in the peptide binding part and acts as the sole alpha chain for DRB1, DRB3, DRB4 and DRB5.
Other Notes	Small volumes of anti-HLA-DRA antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for HLA-DRA purchase	MBS8567000 is an antibody targeting HLA-DRA. Also known as HLA-DRA Polyclonal Antibody. Reactive in Human, Mouse. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HLA-DRA. It may not necessarily be applicable to this product.

NCBI GI #	122206
NCBI GeneID	3122
NCBI Accession #	P01903.1

UniProt Primary Accession #	P01903
UniProt Related Accession #	P01903
NCBI Official Full Name	HLA class II histocompatibility antigen, DR alpha chain
NCBI Official Synonym Full Names	major histocompatibility complex, class II, DR alpha
NCBI Official Symbol	HLA-DRA
NCBI Official Synonym Symbols	HLA-DRA1
UniProt Protein Name	HLA class II histocompatibility antigen, DR alpha chain
UniProt Synonym Protein Names	MHC class II antigen DRA
Protein Family	HLA class II histocompatibility antigen
UniProt Gene Name	HLA-DRA
UniProt Synonym Gene Names	HLA-DRA1
UniProt Entry Name	DRA_HUMAN
NCBI Protein Information	HLA class II histocompatibility antigen, DR alpha chain
UniProt Comments for HLA-DRA	HLA-DRA: 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 miroenvironment has been implicated in the regulation of antigen loading into MHC II molecules, increased acidification produces increased proteolysis and efficient peptide loading. Belongs to the MHC class II family. Protein type: Membrane protein, integral Chromosomal Location of Human Ortholog: 6p21.3 Cellular Component: Golgi membrane; cell surface; lysosome; lysosomal membrane; late endosome membrane; integral to plasma membrane; plasma membrane; trans-Golgi network membrane; MHC class II protein complex Molecular Function: MHC class II receptor activity; peptide antigen binding Biological Process: peptide antigen assembly with MHC class II protein complex; cytokine and chemokine mediated signaling pathway; T cell costimulation; antigen processing and presentation of exogenous peptide antigen via MHC class II; immune response; cognition; T cell receptor signaling pathway; antigen processing and presentation of peptide or polysaccharide antigen via MHC class II; polysaccharide assembly with MHC class II protein complex Disease: Hepatitis B Virus, Susceptibility To
Research Articles on HLA-DRA	**1.** This study demonstrated that only the non-suicidal depressed subgroup revealed significantly lower microglial reaction, i.e., a decreased density of HLA-DR positive microglia versus both depressed suicide victims and controls.

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