HLA-DRB3 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	HLA-DRB3, Polyclonal Antibody
Full Product Name	HLA-DRB3 Antibody, Biotin conjugated
Product Gene Name	anti-HLA-DRB3 antibody
Product Synonym Names	HLA class II histocompatibility antigen; DR beta 3 chain; MHC class II antigen DRB3; HLA-DRB3
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Liquid
Purity/Purification	>95%, Protein G purified
Preparation and Storage	Upon receipt, store at -20 degree C or -80 degree C. Avoid repeated freeze.
Matching Pairs	Unconjugated Antibody: HLA-DRB3 (MBS7103203) Biotin Conjugated Antibody: HLA-DRB3 (MBS7103206)
Molecular Weight	29,962 Da
OMIM	V00522 mRNA
3D Structure	ModBase 3D Structure for P79483
Immunogen	Recombinant Human HLA class II histocompatibility antigen, DR beta 3 chain protein (111-227AA)
Conjugation	Biotin
Buffer	Preservative: 0.03% Proclin 300 Constituents: 50% Glycerol, 0.01M PBS, pH 7.4
Product Categories/Family for anti-HLA-DRB3 antibody	Immunology
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-HLA-DRB3 antibody	ELISA (EIA)

Related Product Information for anti-HLA-DRB3 antibody	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 microenvironment has been implicated in the regulation of antigen loading into MHC II molecules, increased acidification produces increased proteolysis and efficient peptide loading.
Other Notes	Small volumes of anti-HLA-DRB3 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-DRB3 purchase	MBS7103206 is an antibody targeting HLA-DRB3. Also known as HLA-DRB3 Antibody, Biotin conjugated. Reactive in Human. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HLA-DRB3. It may not necessarily be applicable to this product.

NCBI GI #	17986005
NCBI GeneID	3125
NCBI Accession #	NP_072049.2
UniProt Primary Accession #	P79483
UniProt Secondary Accession #	O02875; O19590; O46701; A0ZXY9; A7MA46; B5AU12; B5AU13; B5AU14; B8YAC6; C6H115; C6H116
UniProt Related Accession #	P13761; P79483
GenBank Nucleotide #	NM_022555.3
NCBI Official Full Name	major histocompatibility complex, class II, DR beta 3
NCBI Official Synonym Full Names	major histocompatibility complex, class II, DR beta 3
NCBI Official Symbol	HLA-DRB3
NCBI Official Synonym Symbols	HLA-DR1B; HLA-DR3B
UniProt Protein Name	HLA class II histocompatibility antigen, DR beta 3 chain
UniProt Synonym Protein Names	MHC class II antigen DRB3
Protein Family	HLA class II histocompatibility antigen
UniProt Gene Name	HLA-DRB3
NCBI Protein Information	major histocompatibility complex, class II, DR beta 3

NCBI Summary for HLA-DRB3	HLA-DRB3 belongs to the HLA class II beta chain paralogues. This class II molecule is a heterodimer consisting of an alpha (DRA) and a beta (DRB) 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 beta chain is approximately 26-28 kDa and its gene contains 6 exons. Exon one encodes the leader peptide, exons 2 and 3 encode the two extracellular domains, exon 4 encodes the transmembrane domain and exon 5 encodes the cytoplasmic tail. Within the DR molecule the beta chain contains all the polymorphisms specifying the peptide binding specificities. Typing for these polymorphisms is routinely done for bone marrow and kidney transplantation. DRB1 is expressed at a level five times higher than its paralogues DRB3, DRB4 and DRB5. The presence of DRB3 is linked with allelic variants of DRB1, otherwise it is omitted. There are 4 related pseudogenes: DRB2, DRB6, DRB7, DRB8 and DRB9. [provided by RefSeq, Jul 2008]
Research Articles on HLA-DRB3	**1.** In contrast to HLA-DRB4*01:01P, the inheritance of HLA-DRB3*01:01 is strongly associated with the propensity for mounting a humoral immune response against fetal HPA-1a antigen.
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