HLA-DQA1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	HLA-DQA1, Polyclonal Antibody
Full Product Name	HLA-DQA1 Rabbit pAb
Product Gene Name	anti-HLA-DQA1 antibody
Product Synonym Names	DQ-A1; CELIAC1; HLA-DQA
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 Purified
Preparation and Storage	Store at -20 degree C. Avoid freeze/thaw cycles.
Molecular Weight	28kDa
OMIM	146880
3D Structure	ModBase 3D Structure for P01909
Immunogen	Recombinant fusion protein containing a sequence corresponding to amino acids 24-216 of human HLA-DQA1 (NP_002113.2).
Cellular Localization	Cell Membrane, Endoplasmic Reticulum, Endosome, Golgi Apparatus, Lysosome, Membrane, MHC II
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-HLA-DQA1 antibody	Western Blot (WB), Immunohistochemistry (IHC)
Application Notes for anti-HLA-DQA1 antibody	WB: 1:500-1:2000 IHC: 1:50-1:200

Related Product Information for anti-HLA-DQA1 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-DQA1 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-DQA1 purchase	MBS8544848 is an antibody targeting HLA-DQA1. Also known as HLA-DQA1 Rabbit pAb. Reactive in Human, Mouse. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HLA-DQA1. It may not necessarily be applicable to this product.

NCBI GI #	122188
NCBI GeneID	3117
NCBI Accession #	P01909.1
UniProt Primary Accession #	P01909
UniProt Related Accession #	P01909
NCBI Official Full Name	HLA class II histocompatibility antigen, DQ alpha 1 chain
NCBI Official Synonym Full Names	major histocompatibility complex, class II, DQ alpha 1
NCBI Official Symbol	HLA-DQA1
NCBI Official Synonym Symbols	DQA1; DQ-A1; CELIAC1; HLA-DQA
UniProt Protein Name	HLA class II histocompatibility antigen, DQ alpha 1 chain
UniProt Synonym Protein Names	DC-1 alpha chain; DC-alpha; HLA-DCA; MHC class II DQA1
Protein Family	HLA class II histocompatibility antigen
UniProt Gene Name	HLA-DQA1
UniProt Entry Name	DQA1_HUMAN
NCBI Protein Information	HLA class II histocompatibility antigen, DQ alpha 1 chain

NCBI Summary for HLA-DQA1	HLA-DQA1 belongs to the HLA class II alpha chain paralogues. The class II molecule is a heterodimer consisting of an alpha (DQA) and a beta chain (DQB), 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. It is encoded by 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. Within the DQ molecule both the alpha chain and the beta chain contain the polymorphisms specifying the peptide binding specificities, resulting in up to four different molecules. Typing for these polymorphisms is routinely done for bone marrow transplantation. [provided by RefSeq, Jul 2008]
UniProt Comments for HLA-DQA1	HLA-DQA1 iso4: Protein type: Membrane protein, integral; Cell surface Chromosomal Location of Human Ortholog: 6p21.3 Cellular Component: Golgi membrane; membrane; lysosomal membrane; integral to plasma membrane; plasma membrane; trans-Golgi network membrane; endosome membrane; MHC class II protein complex; external side of plasma membrane Molecular Function: MHC class II receptor activity; peptide antigen binding Biological Process: positive regulation of T cell differentiation; cytokine and chemokine mediated signaling pathway; T cell costimulation; antigen processing and presentation of exogenous peptide antigen via MHC class II; immune response; T cell receptor signaling pathway
Research Articles on HLA-DQA1	**1.** HLA-B*08 gene carry a risk for Type 1 diabetes (T1D) in Egyptian infants, while DR3-DQA1*05-DQB1*02 haplotype lacks linkage disequilibrium with HLA-B*08 among T1D infants.
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