

Recombinant Human HLA-DRB3, His-tagged

Cat. No. HLA-DRB3-13823H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human HLA-DRB3 protein, fused to His-tag, was expressed in E.coli and purified by Ni-sepharose.
Species	Human
Source	E.coli
ProteinLength	31-228a.a.
Description	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.

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Storage	The protein is stored in PBS buffer at -20°C. Avoid repeated freezing and thawing cycles.
Storage Buffer	1M PBS (58mM Na ₂ HPO ₄ , 17mM NaH ₂ PO ₄ , 68mM NaCl, pH8.) added with 300mM Imidazole and 0.7% Sarcosyl, 15% glycerol.
GENE INFORMATION	
Gene Name	HLA-DRB3 major histocompatibility complex, class II, DR beta 3 [Homo sapiens]
Official Symbol	HLA-DRB3
Synonyms	major histocompatibility complex, class II, DR beta 3; 4951; MGC117330; major histocompatibility complex, class II, DR beta 3; DR7; MHC class II antigen DRB3; human leucocyte antigen DRB3; MHC class II HLA-DR beta 3 chain; MHC class II antigen DR beta 3 chain; HLA class II histocompatibility antigen, DR beta 3 chain; HLA class II histocompatibility antigen, DRB1-7 beta chain; HLA-DR3B
Gene ID	3125
mRNA Refseq	NM_022555.3
Protein Refseq	NP_072049.2
MIM	612735
UniProt ID	P79483
Chromosome Location	6p21.3

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Pathway

Adaptive Immune System, organism-specific biosystem; Allograft rejection, organism-specific biosystem; Allograft rejection, conserved biosystem; Antigen processing and presentation, organism-specific biosystem; Antigen processing and presentation, conserved biosystem; Asthma, organism-specific biosystem; Asthma, conserved biosystem;

Function

MHC class II receptor activity; MHC class II receptor activity; peptide antigen binding; protein binding;

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