

Product datasheet

Recombinant Human HLA DRB3 protein ab114313

1 Image

Description

Product name	Recombinant Human HLA DRB3 protein
Expression system	Wheat germ
Accession	<u>P79483</u>
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MVCLKLPGGSSLAALTVTLMVLSSRLAFAGDTRPRFLELR KSECHFFNGT ERVRYLDRYFHNQEEFLRFDSVGEYRAVTELGRPVAES WNSQKDLLEQK RGRVDNYCRHNYGVGESFTVQRRVHPQVTYPAKTQPLQ HHNLLVCSVSG FYPGSIEVRWFRNGQEEKAGVVSTGLIQNGDWTFQTLVM LETVPRSGEVY TCQVEHPSVTSALTVEWRARSESAQSKMLSGVGGFVLG LLFLGAGLFYF RNQKGHSGLQPTGFLS
Predicted molecular weight	55 kDa including tags
Amino acids	1 to 266

Specifications

Our **Abpromise guarantee** covers the use of **ab114313** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE Western blot ELISA
Form	Liquid
Additional notes	This protein is best used within three months from the date of receipt.

Preparation and Storage

Stability and Storage

Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles.

pH: 8.00

Constituents: 0.79% Tris HCl, 0.3% Glutathione

General Info

Function

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 an 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 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.

Sequence similarities

Belongs to the MHC class II family.

Contains 1 Ig-like C1-type (immunoglobulin-like) domain.

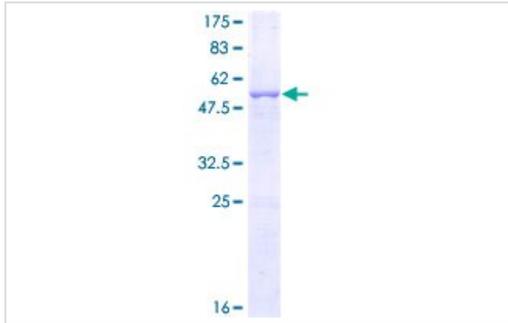
Post-translational modifications

Ubiquitinated by MARCH1 and MARCH8 at Lys-254 leading to sorting into the endosome system and down-regulation of MHC class II.

Cellular localization

Cell membrane. Endoplasmic reticulum membrane. Golgi apparatus > trans-Golgi network membrane. Endosome membrane. Lysosome membrane. Late endosome membrane. The MHC class II complex transits through a number of intracellular compartments in the endocytic pathway until it reaches the cell membrane for antigen presentation.

Images



SDS-PAGE analysis of ab114313 on a 12.5% gel stained with Coomassie Blue.

SDS-PAGE - Recombinant Human HLA DRB3 protein (ab114313)

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