

Datasheet for ABIN5712942

HLA-DPA1 Protein (AA 29-222, Extracellular) (His tag)[Go to Product page](#)**1** Image

Overview

Quantity:	100 µg
Target:	HLA-DPA1
Protein Characteristics:	Extracellular, AA 29-222
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HLA-DPA1 protein is labelled with His tag.
Application:	SDS-PAGE (SDS)

Product Details

Sequence:	AGAIKADHVS TYAAVQTHR PTGEFMFEFD EDEMFYVDLD KKETVWHLEE FGQAFSFEAQ GGLANIAILN NNLNTLIQRS NHTQATNDPP EVTVFPKEPV ELGQPNTLIC HIDKFFPPVL NVTWLCNGEL VTEGVAESLF LPRTDYSFHK FHYLTFVPSA EDFYDCRVEH WGLDQPLLKH WEAQEPIQMP ETTE
Purification:	SDS-PAGE
Purity:	> 90 %

Target Details

Target:	HLA-DPA1
Alternative Name:	DPA1 (HLA-DPA1 Products)
Background:	Binds peptides derived from antigens that access the endocytic route of antigen presenting

Target Details

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 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.

Molecular Weight:	26.4 kDa
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UniProt:	P20036
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Pathways:	TCR Signaling , Cancer Immune Checkpoints , Human Leukocyte Antigen (HLA) in Adaptive Immune Response
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Application Details

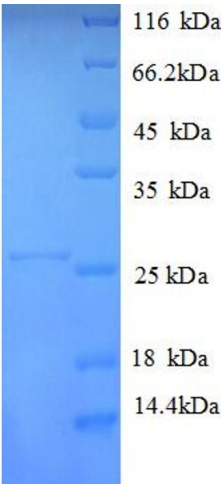
Application Notes:	Optimal working dilution should be determined by the investigator.
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Restrictions:	For Research Use only
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Handling

Format:	Liquid
Concentration:	0.1-2 mg/mL
Buffer:	20 mM Tris-HCl based buffer, pH 8.0
Storage:	-80 °C,4 °C,-20 °C
Storage Comment:	Store at -20°C, for extended storage, conserve at -20°C or -80°C. Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

Images



SDS-PAGE

Image 1.