antibodies

Datasheet for ABIN3092148 HLA-DPA1 Protein (AA 29-222) (His tag)





Overview

Quantity:	1 mg
Target:	HLA-DPA1
Protein Characteristics:	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), ELISA, Western Blotting (WB), Crystallization (Crys)
Product Details	
Sequence:	AGAIKADHVS TYAAFVQTHR PTGEFMFEFD EDEMFYVDLD KKETVWHLEE FGQAFSFEAQ

Sequence:	AGAIKADHVS TYAAFVQTHR PTGEFMFEFD EDEMFYVDLD KKETVWHLEE FGQAFSFEAQ
	GGLANIAILN NNLNTLIQRS NHTQATNDPP EVTVFPKEPV ELGQPNTLIC HIDKFFPPVL
	NVTWLCNGEL VTEGVAESLF LPRTDYSFHK FHYLTFVPSA EDFYDCRVEH WGLDQPLLKH
	WEAQEPIQMP ETTE
	Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a
	special request, please contact us.
Characteristics:	Made in Germany - from design to production - by highly experienced protein experts.
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	The big advantage of ordering our made-to-order proteins in comparison to ordering custom
	made proteins from other companies is that there is no financial obligation in case the protein
	cannot be expressed or purified.
	In the unlikely event that the protein cannot be expressed or purified we do not charge anything
	(other companies might charge you for any performed steps in the expression process for
	custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression
	experiments or purification optimization).
	When you order this made-to-order protein you will only pay upon receival of the correctly
	folded protein. With no financial risk on your end you can rest assured that our experienced
	protein experts will do everything to make sure that you receive the protein you ordered.
	The concentration of our recombinant proteins is measured using the absorbance at 280nm.
	The protein's absorbance will be measured in several dilutions and is measured against its
	specific reference buffer.
	The concentration of the protein is calculated using its specific absorption coefficient. We use
	the Expasy's protparam tool to determine the absorption coefficient of each protein.
Purification:	Two step purification of proteins expressed in bacterial culture:
	1. In a first purification step, the protein is purified from the cleared cell lysate using three
	different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate
	fractions are analyzed by SDS-PAGE. 2. Protein containing fractions of the best purification are subjected to second purification step
	through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and
	Western blot.
Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Endotoxin has not been removed. Please contact us if you require endotoxin removal.
Grade:	Crystallography grade
Target Details	
-	
Target:	HLA-DPA1
Alternative Name:	HLA-DPA1 (HLA-DPA1 Products)
Background:	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

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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.

Molecular Weight:	23.2 kDa Including tag.
UniProt:	P20036
Pathways:	TCR Signaling, Cancer Immune Checkpoints, Human Leukocyte Antigen (HLA) in Adaptive
	Immune Response

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies
	as well. As the protein has not been tested for functional studies yet we cannot offer a gurantee
	though.
Comment:	In cases in which it is highly likely that the recombinant protein with the default tag will be
	insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to

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Application Details	
	increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only
Handling	
Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

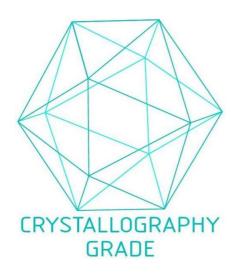


Image 1. "Crystallography Grade" protein due to multi-step, protein-specific purification process