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TIM3 Protein (AA 22-202) (His tag)



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Quantity:	1 mg	
Target:	TIM3 (TIM 3)	
Protein Characteristics:	AA 22-202	
Origin:	Human	
Source:	Insect Cells	
Protein Type:	Recombinant	
Purification tag / Conjugate:	This TIM3 protein is labelled with His tag.	
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)	
Product Details		
Sequence:	SEVEYRAEVG QNAYLPCFYT PAAPGNLVPV CWGKGACPVF ECGNVVLRTD ERDVNYWTSR	
	YWLNGDFRKG DVSLTIENVT LADSGIYCCR IQIPGIMNDE KFNLKLVIKP AKVTPAPTRQ	
	RDFTAAFPRM LTTRGHGPAE TQTLGSLPDI NLTQISTLAN ELRDSRLAND LRDSGATIRI G	
	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. Human HAVCR2 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade. State-of-the-art algorithm used for plasmid design (Gene synthesis). 	
	This protein is a made to order protein and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.	
	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

Purification:

Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

the Expasy's protparam tool to determine the absorption coefficient of each protein.

- 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:

Protein is endotoxin free.

Grade:

Crystallography grade

Target Details

Target:	TIM3 (TIM 3)	
Alternative Name:	HAVCR2 (TIM 3 Products)	
Target Type:	Virus	
Background:	Cell surface receptor implicated in modulating innate and adaptive immune responses. Generally accepted to have an inhibiting function. Reports on stimulating functions suggest	
	that the activity may be influenced by the cellular context and/or the respective ligand	

(PubMed:24825777). Regulates macrophage activation (PubMed:11823861). Inhibits T-helper type 1 lymphocyte (Th1)-mediated auto- and alloimmune responses and promotes immunological tolerance (PubMed:14556005). In CD8+ cells attenuates TCR-induced signaling, specifically by blocking NF-kappaB and NFAT promoter activities resulting in the loss of IL-2 secretion. The function may implicate its association with LCK proposed to impair phosphorylation of TCR subunits, and/or LGALS9-dependent recruitment of PTPRC to the immunological synapse (PubMed:24337741, PubMed:26492563). In contrast, shown to activate TCR-induced signaling in T-cells probably implicating ZAP70, LCP2, LCK and FYN (By similarity). Expressed on Treg cells can inhibit Th17 cell responses (PubMed:24838857). Receptor for LGALS9 (PubMed:16286920, PubMed:24337741). Binding to LGALS9 is believed to result in suppression of T-cell responses, the resulting apoptosis of antigen-specific cells may implicate HAVCR2 phosphorylation and disruption of its association with BAG6. Binding to LGALS9 is proposed to be involved in innate immune response to intracellular pathogens. Expressed on Th1 cells interacts with LGALS9 expressed on Mycobacterium tuberculosisinfected macrophages to stimulate antibactericidal activity including IL-1 beta secretion and to restrict intracellular bacterial growth (By similarity). However, the function as receptor for LGALS9 has been challenged (PubMed:23555261). Also reported to enhance CD8+ T-cell responses to an acute infection such as by Listeria monocytogenes (By similarity). Receptor for phosphatidylserine (PtSer), PtSer-binding is calcium-dependent. May recognize PtSer on apoptotic cells leading to their phagocytosis. Mediates the engulfment of apoptotic cells by dendritic cells. Expressed on T-cells, promotes conjugation but not engulfment of apoptotic cells. Expressed on dendritic cells (DCs) positively regulates innate immune response and in synergy with Toll-like receptors promotes secretion of TNF-alpha. In tumor-imfiltrating DCs suppresses nucleic acid-mediated innate immune repsonse by interaction with HMGB1 and interfering with nucleic acid-sensing and trafficking of nucleid acids to endosomes (By similarity). Expressed on natural killer (NK) cells acts as a coreceptor to enhance IFN-gamma production in response to LGALS9 (PubMed:22323453). In contrast, shown to suppress NK cellmediated cytotoxicity (PubMed:22383801). Negatively regulates NK cell function in LPSinduced endotoxic shock (By similarity). {ECO:0000250|UniProtKB:Q8VIM0, ECO:0000269|PubMed:11823861, ECO:0000269|PubMed:14556005, ECO:0000269|PubMed:16286920, ECO:0000269|PubMed:22323453, ECO:0000269|PubMed:23555261, ECO:0000269|PubMed:24838857, ECO:0000269|PubMed:26492563, ECO:0000305|PubMed:24825777}.

Molecular Weight:

21.0 kDa Including tag.

UniProt:

Q8TDQ0

Target Details

Pathways:	Regulation of Lipid Metabolism by PPARalpha, Cancer Immune Checkpoints	
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 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)	