

Product datasheet

Recombinant human TIM 3 protein (Fc Chimera Active) ab224631

2 Images

Description

<b>Product name</b>	Recombinant human TIM 3 protein (Fc Chimera Active)	
<b>Biological activity</b>	Measured by its binding ability in a functional ELISA. Immobilized ab224631 at 2 µg/ml (100 µl/well), can bind anti-TIM3 mAb with a linear range of 0.2 - 3 ng/ml.	
<b>Purity</b>	> 85 % SDS-PAGE.	
<b>Endotoxin level</b>	< 1.000 Eu/µg	
<b>Expression system</b>	HEK 293 cells	
<b>Accession</b>	<a href="#">Q8TDQ0</a>	
<b>Protein length</b>	Protein fragment	
<b>Animal free</b>	No	
<b>Nature</b>	Recombinant	
<b>Species</b>	Human	
<b>Sequence</b>	SEVEYRAEVGQNAYLPCFYTPAAPGNLVPVCWGKGA CPVFECGNVVLRTD ERDVNYWTSRYWLNDFRKGDVSLTIENVTLADSGYC CRIQIPGIMNDE KFNLKLVIKPAKVTPAPTRQRDFTAAPRMLTTRGHGP AETQTLGSLPDI NLTQISTLANELRDSRLANDLRDSGATIR	
<b>Predicted molecular weight</b>	47 kDa including tags	
<b>Amino acids</b>	22 to 200	
<b>Additional sequence information</b>	Fused to human IgG1 Fc tag at the C-terminus.	

Specifications

Our [Abpromise guarantee](#) covers the use of **ab224631** in the following tested applications.

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

<b>Applications</b>	Functional Studies
	SDS-PAGE

**Form** Lyophilised

## Preparation and Storage

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### Stability and Storage

Shipped at 4°C. Store at -20°C. Avoid freeze / thaw cycle.

pH: 7.50

Constituents: 0.75% Glycine, 5% Trehalose, 0.61% Tris, Sodium chloride, L-Arginine

Lyophilized from 0.22 µm filtered solution.

This product is an active protein and may elicit a biological response in vivo, handle with caution.

### Reconstitution

It is recommended to reconstitute the lyophilized product in sterile deionized water to a final concentration of 1 mg/ml. Solubilize for 30 to 60 minutes at room temperature with occasional gentle mixing. Carrier protein (0.1% HSA or BSA) is strongly recommended for further dilution and long term storage.

## General Info

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### Function

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 tuberculosis-infected 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-infiltrating DCs suppresses nucleic acid-mediated innate immune response by interaction with HMGB1 and interfering with nucleic acid-sensing and trafficking of nucleic 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 cell-mediated cytotoxicity (PubMed:22383801). Negatively regulates NK cell function in LPS-induced endotoxic shock.

### Tissue specificity

Expressed in T-helper type 1 (Th1) lymphocytes. Expressed on regulatory T (Treg) cells after TCR

stimulation. Expressed in dendritic cells and natural killer (NK) cells. Expressed in epithelial tissues. Expression is increased on CD4+ and CD8+ T-cells in chronic hepatitis C virus (HCV) infection. In progressive HIV-1 infection, expression is up-regulated on HIV-1-specific CD8 T-cells.

#### Involvement in disease

May be involved in T-cell exhaustion associated with chronic viral infections such as with human immunodeficiency virus (HIV) and hepatitis C virus (HCV).

#### Sequence similarities

Belongs to the immunoglobulin superfamily. TIM family.  
Contains 1 Ig-like V-type (immunoglobulin-like) domain.

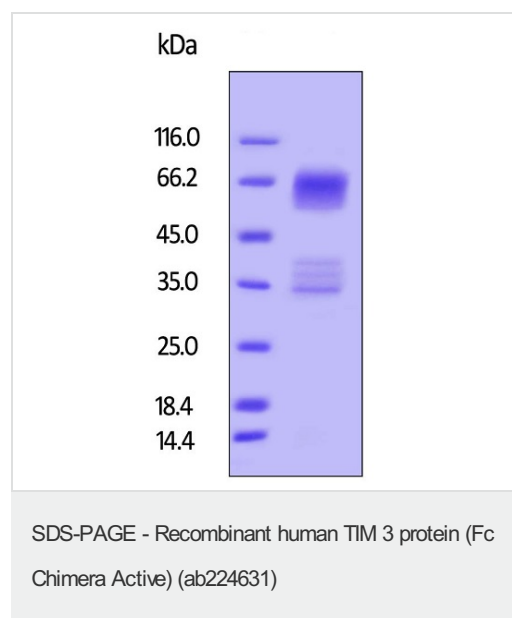
#### Post-translational modifications

O-glycosylated with core 1 or possibly core 8 glycans.  
Phosphorylated on tyrosine residues; modestly increased after TCR/CD28 stimulation. Can be phosphorylated in the cytoplasmic domain by FYN (By similarity). Phosphorylation at Tyr-265 is increased by stimulation with ligand LGALS9.

#### Cellular localization

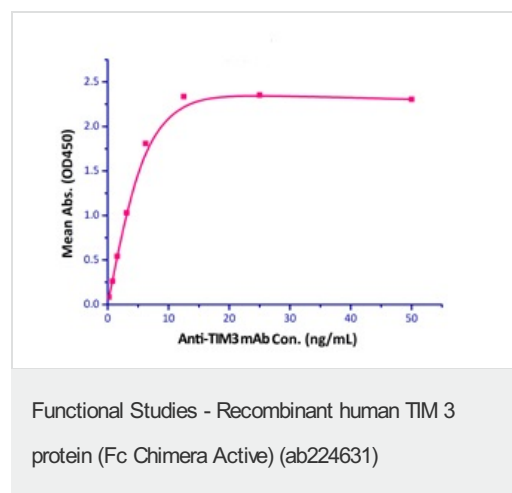
Membrane. Cell junction. Localizes to the immunological synapse between CD8+ T-cells and target cells.

### Images



ab224631 analyzed by SDS-PAGE under reducing conditions and stained overnight with Coomassie Blue.

The protein migrates as 55-67 kDa under reducing conditions (SDS-PAGE) due to glycosylation.



Immobilized ab224631 at 2 µg/ml (100 µl/well), can bind anti-TIM3 mAb with a linear range of 0.2 - 3 ng/ml.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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