

Product datasheet

Recombinant Mouse TIM 3 protein (Fc Chimera) ab223101

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Description

Product name	Recombinant Mouse TIM 3 protein (Fc Chimera)
Purity	> 90 % SDS-PAGE.
Endotoxin level	= 1.000 Eu/μg
Expression system	HEK 293 cells
Accession	<u>Q8VIM0</u>
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Mouse
Predicted molecular weight	46 kDa including tags
Molecular weight information	The protein has a calculated MW of 45.8 kDa. The protein migrates as 60-67 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
Amino acids	20 to 191
Additional sequence information	The protein is fused at the C-terminal to a Fc-tag (human Fc).

Specifications

Our **Abpromise guarantee** covers the use of **ab223101** 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
Form	Lyophilized

Preparation and Storage

Stability and Storage	Shipped at 4°C. Store at +4°C. Avoid freeze / thaw cycle. pH: 7.4 Constituents: 0.75% Glycine, 5% Trehalose, 0.61% Tris, L-Arginine, Sodium chloride
Reconstitution	Reconstitute with sterile deionized water to a concentration of 400 μg/ml.

General Info

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.

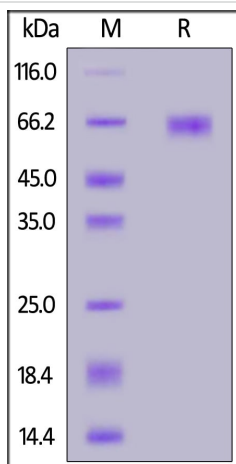
Post-translational modifications

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 cytoplasmatic 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



Mouse TIM-3, Fc Tag (ab223101) on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

SDS-PAGE - Recombinant Mouse TIM 3 protein (Fc Chimera) (ab223101)

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