

## Product datasheet

# Recombinant mouse TIM 3 protein (Fc Chimera Active) ab215005

### Description

<b>Product name</b>	Recombinant mouse TIM 3 protein (Fc Chimera Active)	
<b>Biological activity</b>	Immobilized recombinant human Galectin-9 at 500 ng/mL can bind Tim-3 (mouse):Fc (Human) (rec.) with an apparent KD <10nM. Optimal dilutions should be determined by each laboratory for each application.	
<b>Purity</b>	≥ 98 % SDS-PAGE.	
<b>Endotoxin level</b>	< 5.000 Eu/mg	
<b>Expression system</b>	HEK 293 cells	
<b>Accession</b>	<a href="#">Q8VIM0</a>	
<b>Protein length</b>	Protein fragment	
<b>Animal free</b>	No	
<b>Nature</b>	Recombinant	
<b>Species</b>	Mouse	
<b>Sequence</b>	SLENAYVFEV GKNAYLPCSY TLSTPGALVP MCWKGKGFPCW SQCTNELLRT DERNVTYQKS SRYQLKGD LN KGDVSLIKN VTLDDHGTYC CRIQFPGLMN DKKLELKLDI KAAKVTPAQT AHGDSTTASP RTLTERNGS ETQTLVTLHN NNGTKISTWA DEIKDSGET	
<b>Predicted molecular weight</b>	65 kDa including tags	
<b>Amino acids</b>	21 to 189	
<b>Additional sequence information</b>	Extracellular domain fused to the N terminus of the Fc region of mouse IgG2a. AAI06852.1	

### Specifications

Our [Abpromise guarantee](#) covers the use of **ab215005** 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
<b>Form</b>	Lyophilized

## Preparation and Storage

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### Stability and Storage

Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C long term. Avoid freeze / thaw cycle.

Constituent: 100% PBS

Lyophilized from 0.2µm-filtered solution.

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

### Reconstitution

Reconstitute with 100 µL sterile water. Add 1X PBS to the desired protein concentration. Working aliquots are stable for up to 3 months when stored at -20°C.

## 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.

<b>Involvement in disease</b>	May be involved in T-cell exhaustion associated with chronic viral infections such as with human immunodeficiency virus (HIV) and hepatitis C virus (HCV).
<b>Sequence similarities</b>	Belongs to the immunoglobulin superfamily. TIM family. Contains 1 Ig-like V-type (immunoglobulin-like) domain.
<b>Post-translational modifications</b>	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.
<b>Cellular localization</b>	Membrane. Cell junction. Localizes to the immunological synapse between CD8+ T-cells and target cells.

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

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