

## ARG70320 Mouse TIM3 recombinant protein (Fc-His-tagged, C-ter)

Package: 100 µg  
Store at: -20°C

### Summary

Product Description	HEK293 expressed, Fc-His-tagged (C-ter) Mouse TIM3 recombinant protein.
Tested Reactivity	Ms
Tested Application	Binding, ELISA, SDS-PAGE
Target Name	TIM3
Species	Mouse
A.A. Sequence	Arg20 - Arg191 of Mouse TIM3 (NP_599011.2) with an Fc - 6X His tag at the C - terminus.
Expression System	HEK293
Alternate Names	KIM-3; TIM3; TIMD-3; Tim-3; TIM-3; CD366; T-cell immunoglobulin and mucin domain-containing protein 3; TIMD3; T-cell membrane protein 3; HAVcr-2; T-cell immunoglobulin mucin receptor 3; Hepatitis A virus cellular receptor 2

### Application Instructions

Application Note	Binding activity test: Measured by its binding ability in a functional ELISA. Immobilized Recombinant Mouse TIM-3 at 2 µg/ml (100 µl/well) can bind Anti-TIM-3 antibody with a linear range of 1.0-3.0 µg/ml.
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### Properties

Form	Powder
Purification Note	0.22 µm filter sterilized. Endotoxin level is 95% (by SDS-PAGE)
Buffer	PBS (pH 7.4)
Reconstitution	Reconstitute to a concentration of 0.1 - 0.5 mg/ml in sterile distilled water.
Storage instruction	For long term, lyophilized protein should be stored at -20°C or -80°C. After reconstitution, aliquot and store at -20°C for up to one month, at 2-8°C for up to one week. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening.
Note	For laboratory research only, not for drug, diagnostic or other use.

### Bioinformation

Gene Symbol	HAVCR2
Gene Full Name	hepatitis A virus cellular receptor 2
Background	The protein encoded by this gene belongs to the immunoglobulin superfamily, and TIM family of proteins. CD4-positive T helper lymphocytes can be divided into types 1 (Th1) and 2 (Th2) on the basis of their cytokine secretion patterns. Th1 cells are involved in cell-mediated immunity to intracellular pathogens and delayed-type hypersensitivity reactions, whereas, Th2 cells are involved in the control of extracellular helminthic infections and the promotion of atopic and allergic diseases. This protein is a Th1-specific cell surface protein that regulates macrophage activation, and inhibits Th1-mediated auto-

and alloimmune responses, and promotes immunological tolerance. [provided by RefSeq, Sep 2011]

## 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:2355261). 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 (By similarity). [UniProt]

## Calculated Mw

33 kDa

## PTM

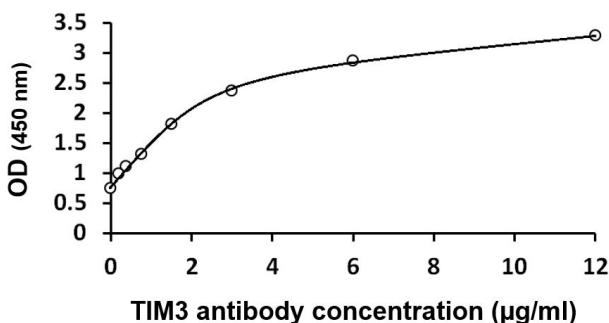
O-glycosylated with core 1 or possibly core 8 glycans.

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. [UniProt]

## Cellular Localization

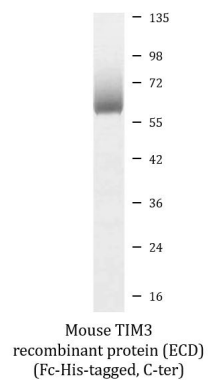
Membrane; Single-pass type I membrane protein. Cell junction. Note=Localizes to the immunological synapse between CD8+ T-cells and target cells. [UniProt]

## Images



ARG70320 Mouse TIM3 recombinant protein (ECD) (Fc-His-tagged, C-ter) ELISA image

ELISA: The plate was coated with ARG70320 Mouse TIM3 recombinant protein (ECD) (Fc-His-tagged, C-ter) at 2 µg/ml (100 µl/well). Samples were detected with serially diluted anti-TIM3 antibody.



ARG70320 Mouse TIM3 recombinant protein (ECD) (Fc-His-tagged, C-ter) SDS-PAGE image

SDS-PAGE analysis of ARG70320 Mouse TIM3 recombinant protein (ECD) (Fc-His-tagged, C-ter).