

## Active Recombinant Human HAVCR1 protein, Fc-tagged

Cat. No. HAVCR1-227H Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant Human HAVCR1(Ser21-Thr288) fused with Fc region of Human IgG1 at C-terminal was expressed in HEK293.
<b>Species</b>	Human
<b>Source</b>	HEK293
<b>ProteinLength</b>	21-288 a.a.
<b>Description</b>	<p>T cell immunoglobulin and mucin domain 1 (TIM-1), also known as KIM-1 and HAVcr1, is a member of the TIM family which is involved in the regulation of innate and adaptive immune responses. TIM-1 is a type I transmembrane protein that contains an N-terminal immunoglobulin-like domain, a mucin domain with O- and N-linked carbohydrates, a transmembrane segment, and a cytoplasmic signaling domain. Multiple TIM-1 variants can be produced due to polymorphisms or alternative splicing resulting in deletions in the mucin domain. Within the extracellular domain, human TIM-1 shares 41% aa sequence identity with mouse and rat TIM-1. TIM-1 is expressed on splenic B cells, IL-10+ regulatory B cells, CD4+ T cells, mast cells, invariant NKT (iNKT) cells, dendritic cells, kidney epithelium and a broad range of mucosal epithelium. It is upregulated on activated Th2 cells, after dendritic cell maturation, and on kidney tubular epithelial cells after injury. Metalloproteinase-mediated cleavage of TIM-1 at the membrane-proximal region results in the release of a soluble form of TIM-1 which is detectable in the urine and in circulation. TIM-1 serves as a receptor for phosphatidylserine, LMIR5/CD300b, TIM-1 (homophilic),</p>

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TIM-4, IgA, and the glycoproteins of a number of enveloped viruses. Its interaction with phosphatidylserine enables TIM-1 to mediate the phagocytosis of apoptotic cells and iNKT cell activation. TIM-1 binding induces the activation of LMIR5-expressing myeloid cells, contributing to tissue homeostasis as well as damage following kidney injury. TIM-1 ligation co-stimulates T cell activation and enhances Th2 cytokine production. In humans, TIM-1 serves as a cellular entry receptor for various viruses, including hepatitis A virus, Ebolavirus and Marburgvirus.

**Predicted N Terminal** Ser21

**Form** Lyophilized from a 0.2 µm filtered solution in PBS.

**Bio-activity** Measured by its ability to inhibit anti-CD3-induced proliferation of stimulated human T cells. The ED50 for this effect is typically 0.6-3.6 µg/mL.

**Molecular Mass** Predicted Molecular Mass: 55 kDa  
SDS-PAGE: 112-129 kDa, reducing conditions

**Endotoxin** <0.1 EU per 1 µg of the protein by the LAL method.

**Purity** >85%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

**Storage** Use a manual defrost freezer and avoid repeated freeze-thaw cycles.  
12 months from date of receipt, -20 to -70 centigrade as supplied.  
1 month, 2 to 8 centigrade under sterile conditions after reconstitution.  
3 months, -20 to -70 centigrade under sterile conditions after reconstitution.

**Reconstitution** Reconstitute at 500 µg/mL in PBS.

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**GENE INFORMATION**

<b>Gene Name</b>	HAVCR1 hepatitis A virus cellular receptor 1 [ Homo sapiens ]
<b>Official Symbol</b>	HAVCR1
<b>Synonyms</b>	HAVCR1; hepatitis A virus cellular receptor 1; HAVCR; HAVCR 1; TIM 1; TIM1; TIMD1; kidney injury molecule 1; T-cell membrane protein 1; T cell immunoglobulin domain and mucin domain protein 1; TIM; KIM1; KIM-1; TIM-1; TIMD-1; HAVCR-1;
<b>Gene ID</b>	26762
<b>mRNA Refseq</b>	NM_001099414
<b>Protein Refseq</b>	NP_001092884
<b>MIM</b>	606518
<b>UniProt ID</b>	Q96D42

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