

# Human TIM-3 / HAVCR2 Protein (Fc Tag)



Sino Biological  
Biological Solution Specialist

Catalog Number: 10390-H38H

## General Information

### Gene Name Synonym:

TIM3, TIMD3

### Protein Construction:

A DNA sequence encoding the human HAVCR2 (NP\_116171.3) (Met1-Arg200) was expressed with the Fc region of mouse IgG2a at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 90 % as determined by SDS-PAGE.

### Endotoxin:

< 1.0 EU per µg protein as determined by the LAL method.

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Ser 22

### Molecular Mass:

The recombinant human HAVCR2 consists of 412 amino acids and predicts a molecular mass of 46.2 kDa.

### Formulation:

Lyophilized from sterile 20 mM Tris, 150 mM NaCl, pH 8.5.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

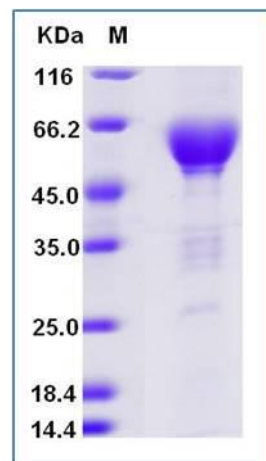
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Hepatitis A virus cellular receptor 2 (HAVCR2), formerly known as T cell immunoglobulin and mucin domain-3 (TIM-3), is a transmembrane glycoprotein expressed on the surface of terminally differentiated Th1 cells but not on Th2 cells. It was the first surface molecule that specifically identifies Th1 cells in both mice and human. Recently, identification of Galectin-9 as a ligand for TIM-3 has established the TIM-3-Galectin-9 pathway as an important regulator of Th1 immunity and tolerance induction. Engagement of Tim-3 by its ligand galectin-9 negatively regulates IFN-γ secretion and influences the ability to induce T cell tolerance in both mice and man. It suggests a novel paradigm in which dysregulation of the TIM-3-galectin-9 pathway could underlie chronic autoimmune disease states, such as multiple sclerosis. Recent work has explored the role of TIM-3 in systemic lupus erythematosus (SLE), and their results indicate that TIM-3 may represent a novel target for the treatment of SLE. Numerous studies have demonstrated that Tim-3 influences autoimmune diseases, including diabetes and multiple sclerosis, and its role in other inflammatory diseases including allergies and cancer is beginning to become clear. In tumor rejection model, soluble form of Tim-3 (sTim-3) significantly impaired T cell antitumor immunity, evidenced by decreased antitumor CTL activity and reduced amount of tumor-infiltrating lymphocytes in tumor. sTim-3 as an immunoregulatory molecule that may be involved in the negative regulation of T cell-mediated immune response.

## References

1. Geng H, et al. (2006) Soluble form of T cell Ig mucin 3 is an inhibitory molecule in T cell-mediated immune response. *J Immunol.* 176(3): 1411-20.
2. Anderson AC, et al. (2006) TIM-3 in autoimmunity. *Curr Opin Immunol.* 18(6): 665-9.
3. Anderson DE. (2007) TIM-3 as a therapeutic target in human inflammatory diseases. *Expert Opin Ther Targets.* 11(8): 1005-9.
4. Pan HF, et al. (2010) TIM-3 as a new therapeutic target in systemic lupus erythematosus. *Mol Biol Rep.* 37(1): 395-8.

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