Catalog # TM3-H5229



#### Synonym

HAVCR2,TIM3,TIMD3,FLJ14428,KIM3

#### Source

Human TIM-3, His Tag(TM3-H5229) is expressed from human 293 cells (HEK293). It contains AA Ser 22 - Arg 200 (Accession # <u>Q8TDQ0-1</u>). Predicted N-terminus: Ser 22

# **Molecular Characterization**

TIM-3(Ser 22 - Arg 200) Q8TDQ0-1 Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 21.8 kDa. The protein migrates as 44-50 kDa when calibrated against <u>Star Ribbon Pre-stained Protein Marker</u> under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 1.0 EU per  $\mu$ g by the LAL method.

# Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

#### Formulation

Lyophilized from 0.22  $\mu$ m filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

#### Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

## Storage

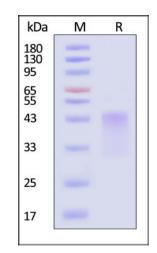
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

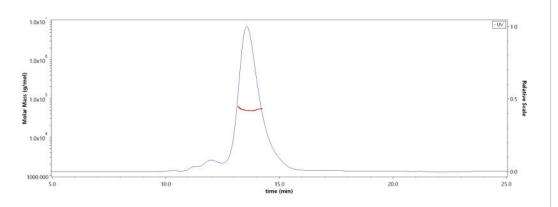
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## **SDS-PAGE**



Human TIM-3, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With <u>Star Ribbon Pre-stained Protein Marker</u>).

# SEC-MALS



The purity of Human TIM-3, His Tag (Cat. No. TM3-H5229) is more than 90% and the molecular weight of this protein is around 35-50 kDa verified by SEC-MALS.



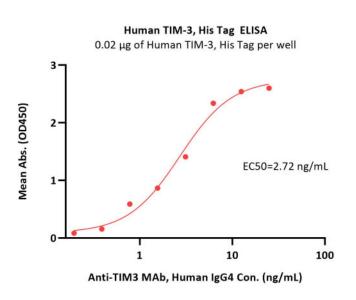
**Bioactivity-ELISA** 



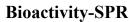


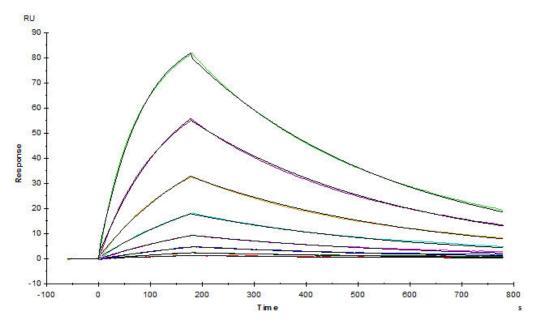


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Immobilized Human TIM-3, His Tag (Cat. No. TM3-H5229) at 0.2  $\mu$ g/mL (100  $\mu$ L/well) can bind Anti-TIM3 MAb, Human IgG4 with a linear range of 0.2-6 ng/mL (QC tested).





Anti-Human TIM-3 MAb (human IgG4) captured on CM5 chip via Anti-Human IgG Fc antibodies surface, can bind Human TIM-3, His Tag (Cat. No. TM3-H5229) with an affinity constant of 9.7 nM as determined in a SPR assay (Biacore T200) (Routinely tested).

# Background

Hepatitis A virus cellular receptor 2 is also known as HAVCR2, FLJ14428, KIM3, TIM3, TIMD3, is a member of the TIM family of immune regulating molecules with one Ig-like V-type domain and a Ser/Thr-rich mucin stalk. 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 and their associated cytokines 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. The 2

types of cells also cross-regulate the functions of the other. HAVCR2 is a Th1-specific cell surface protein that regulates macrophage activation and enhances the severity of experimental autoimmune encephalomyelitis in mice. HAVCR2 regulates macrophage activation. Inhibits T-helper type 1 lymphocyte (Th1)-mediated auto- and alloimmune responses and promotes immunological tolerance. May be also involved in T-cell homing. Dysregulation of the HAVCR2-galectin-9 pathway could underlie chronic autoimmune disease states in human, such as multiple sclerosis.

## **Clinical and Translational Updates**



