

TIM-1/KIM-1/HAVCR1 Protein, Mouse, Recombinant (His & hFc)

General Information

Synonyms:	TIM-1;KIM-1;Tim1;Timd1;AI503787;hepatitis A virus cellular receptor 1
Protein Construction:	A DNA sequence encoding the extracellular domain of mouse HAVCR1 isoform b (NP_001160104.1) (Tyr 22-Thr 212) was fused with a polyhistidine tag at the C-terminus and the Fc region of human IgG1 at the N-terminus. Predicted N terminal: Glu 20
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q3V033
Molecular Weight:	49 kDa (predicted); 80-85 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 97 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 20 mM Tris-Citrate, 150 mM NaCl, pH 6. 5. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:	A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

HAV cellular receptor 1 (HAVCR1), also known as Kidney injury molecule 1 (KIM-1) and T cell immunoglobulin mucin 1 (TIM-1), is a type of integral membrane glycoprotein. KIM-1 protein is widely expressed with the highest levels in the kidney and testis. It has been shown to play a major role as a human susceptibility gene for asthma, allergy, and autoimmunity. IgA1 lambda is a specific ligand of KIM-1 protein and that their association has a

synergistic effect in virus-receptor interactions. KIM-1 involves in the pathogenesis of acute kidney injury. It had been confirmed that KIM-1 is a human urinary renal dysfunction biomarker. Moreover, KIM-1 protein is a novel regulatory molecule of flow-induced calcium signaling.

Reference

Tami C, et al. (2007) Immunoglobulin A (IgA) is a natural ligand of hepatitis A virus cellular receptor 1 (HAVCR1), and the association of IgA with HAVCR1 enhances virus-receptor interactions. *J Virol.* 81(7): 3437-46.

Rees AJ, et al. (2008) Kim-1/Tim-1: from biomarker to therapeutic target? *Nephrol Dial Transplant.* 23(11): 3394-6.

Chaturvedi S, et al. (2009) Assay validation for KIM-1: human urinary renal dysfunction biomarker. *Int J Biol Sci.* 5 (2): 128-34.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286 E_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481