Data Sheet (Cat.No.TMPY-01951)

TargetMol

TIM-1/KIM-1/HAVCR1 Protein, Rhesus, Recombinant

General Information

Synonyms: hepatitis A virus cellular receptor 1

Protein Construction: A DNA sequence encoding the rhesus HAVCR1 (BAJ61041.1) (Asp 20-Gly 339) was expressed and purified, with additional two amino acid (Gly & Pro) at the N-terminus. Predicted N terminal: Gly

Species: Rhesus

Expression Host: HEK293 Cells

Accession: BAJ61041.1

Molecular Weight: 32.4 kDa (predicted)

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: > 95 % 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 PBS, pH 7.4. 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.

Actual storage temperature shall be subject to the COA.

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. IgA1lambda 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.