Data Sheet (Cat.No.TMPY-03424)

TargetMol

TIM-3/KIM-3/HAVCR2 Protein, Mouse, Recombinant (His)

General Information

Synonyms: hepatitis A virus cellular receptor 2;TIM-3;Timd3;Tim3

Protein Construction: A DNA sequence encoding the mouse HAVCR2 (AAL65156.1) (Met1-Arg191) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Leu 22

Species: Mouse

Expression Host: HEK293 Cells

Accession: AAL65156.1

Molecular Weight: 20.3 kDa (predicted); 37-45 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: > 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

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 the mouse and human. Recently, the 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-gamma 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 the tumor rejection model, the 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 the tumor. sTim-3 as an immunoregulatory molecule that may be involved in the negative regulation of T cell-mediated immune response.Cancer ImmunotherapyCo-inhibitory Immune Checkpoint TargetsImmune CheckpointImmune Checkpoint Detection: ELISA AntibodiesImmune Checkpoint Detection: IP AntibodiesImmune Checkpoint Detection: WB AntibodiesImmune Checkpoint ProteinsImmune Checkpoint TargetsImmunotherapyTargeted Therapy

Reference

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.

Anderson AC, et al. (2006) TIM-3 in autoimmunity. Curr Opin Immunol. 18(6): 665-9.

Anderson DE. (2007) TIM-3 as a therapeutic target in human inflammatory diseases. Expert Opin Ther Targets. 11 (8): 1005-9.

Pan HF, et al. (2010) TIM-3 as a new therapeutic target in systemic lupus erythematosus. Mol Biol Rep. 37(1): 395-8.

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