Data Sheet (Cat.No.TMPS-00135)

TargetMol

TIM-3/KIM-3/HAVCR2 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	HAVcr-2;TIMD-3;TIM-3;T-cell immunoglobulin and mucin domain-containing protein 3;T-cell membrane protein 3;Hepatitis A virus cellular receptor 2;T-cell immunoglobulin mucin receptor 3
Protein Construction:	Ser22-Arg200
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q8TDQ0
Molecular Weight:	60~65 kDa (Reducing conditions)

QC Testing

Biological Activity:	Assay #1: Immobilized TIM-3, hFc, Human at 0.5 μg/ml, the concentration of Anti-TIM3 mouse antibody (Genscript) that produces 50% optimal binding response is found to be approximately 5.0 ng/ml. Assay #2: Immobilized Galectin-9, His, Human at 0.5 μg/ml (100 μl/well) can bind TIM-3, hFc, Human with a linear range of 0.78-6.25 μg/ml.
Purity:	> 95% as determined by SDS-PAGE
Endotoxin:	< 0.2 EU/μg of protein as determined by the LAL method.
Formulation:	Lyophilized from a 0.2 μm filtered solution in PBS.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

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

T cell Ig- and mucin-domain-containing molecules (TIMs) are a family of transmembrane proteins expressed by various immune cells. TIM-3 is an inhibitory molecule that is induced following T cell activation. TIM-3 is expressed by exhausted T cells in the settings of chronic infection and cancer, and tumor-infiltrating T cells that co-express

PD-1 and TIM-3 exhibit the most severe exhausted phenotype. Tumor-infiltrating dendritic cells also express TIM-3. TIM-3 expression on DCs was found to suppress innate immunity by reducing the immunogenicity of nucleic acids released by dying tumor cells. Research studies show that heterodimerization of TIM-3 with CEACAM-1 is critical for the inhibitory function of TIM-3, and co-blockade of TIM-3 and CEACAM-1 enhanced antitumor responses in a mouse model of colorectal cancer. Its binding to Galectin-9 induces a range of immunosuppressive functions which enhance immune tolerance and inhibit anti-tumor immunity. TIM-3 ligation attenuates CD8 + and Th1 cell responses and promotes the activity of Treg and myeloid derived suppressor cells. In addition, dendritic cell-expressed TIM-3 dampens inflammation by enabling the phagocytosis of apoptotic cells and the cross-presentation of apoptotic cell antigens.

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