Recombinant Mouse TIM-3 Fc Chimera

Catalog Number: 1529-TM

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived

Mouse TIM-3 (Leu22-Arg191) Accession # AAL65156	PIEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis: Leu22 & Asp24

Structure / Form: Disulfide-linked homodimer

Predicted Molecular Mass: 45.6 kDa (monomer)

SPECIFICATIONS

SDS-PAGE: 67-80 kDa, reducing conditions

Activity: Measured by its binding ability in a functional ELISA.
Immobilized Recombinant Human Galectin-9 (Catalog # 2045-GA) at 500 ng/mL can bind recombinant mouse TIM-3 Fc Chimera with an apparent K_D <10 nM.

Endotoxin Level: <0.10 EU per 1 µg of the protein by the LAL method.

Purity: >90%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation: Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution: Reconstitute at 100 µg/mL in sterile PBS.

Shipping: The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage: **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

TIM-3 (T cell immunoglobulin and mucin domain-3), also known as HAVCR2, is a 60 kDa member of the TIM family of immune regulating molecules. TIMs are type I transmembrane glycoproteins with one Ig-like V-type domain and a Ser/Thr-rich mucin stalk region (1, 2). Mature mouse TIM-3 consists of a 174 amino acid (aa) extracellular domain (ECD), a 21 aa transmembrane segment, and a 67 aa cytoplasmic tail (3). Within the ECD, mouse TIM-3 shares 58% and 75% aa sequence identity with human and rat TIM-3, respectively. TIM-3 is up-regulated on several populations of activated myeloid cells (macrophage, monocyte, dendritic cell, microglia, mast cell) and T cells (Th1, $CD8^+$, NK, Treg) (4-11). Its binding to Galectin-9 induces a range of immunosuppressive functions which enhance immune tolerance and inhibit anti-tumor immunity (12). TIM-3 ligation attenuates $CD8^+$ and Th1 cell responses (12-14) and promotes the activity of Treg and myeloid derived suppressor cells (9, 12, 14, 15). In addition, dendritic cell-expressed TIM-3 dampens inflammation by enabling the phagocytosis of apoptotic cells and the cross-presentation of apoptotic cell antigens (4). It also binds the alarmin HMGB1, thereby preventing the activation of TLRs in response to released tumor cell DNA (5). TIM-3 interactions with Galectin-9 can alternatively trigger immune stimulatory effects, such as the coactivation of NK cell cytotoxicity (11).

References:

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