Recombinant Cynomolgus Monkey TIM-3 Fc Chimera

Catalog Number: 7914-TM

DESCRIPTION

Source: Human embryonic kidney cell, HEK293-derived

Cynomolgus Monkey TIM-3 (Ser22-Arg201) Accession # EHH54703	IEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Ser22 & Val24
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	46.3 kDa (monomer)

SPECIFICATIONS

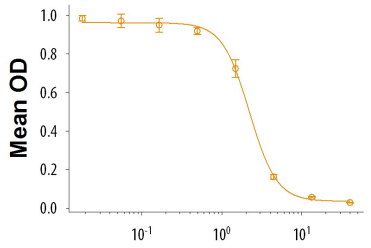
SDS-PAGE	60-75 kDa, reducing conditions
Activity	Measured by its ability to inhibit anti-CD3 antibody induced IL-2 secretion in human T lymphocytes. The ED_{50} for this effect is 0.5-3 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing 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 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.

DATA

Bioactivity



Recombinant Cynomolgus Monkey TIM-3 (Catalog # 7914-TM) inhibits anti-CD3 antibody induced IL-2 secretion in human T lymphocytes. The ED_{50} for this effect is 0.5-3 µg/mL.

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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 cynomolgus TIM-3 consists of a 182 amino acid (aa) extracellular domain (ECD), a 21 aa transmembrane segment, and a 78 aa cytoplasmic tail. Within the ECD, cynomolgus (or crab-eating macaque) monkey TIM-3 shares 81%, 57%, and 56% aa sequence identity with human, mouse, 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) (3-10). Its binding to Galectin-9 induces a range of immunosuppressive functions which enhance immune tolerance and inhibit anti-tumor immunity (11). TIM-3 ligation attenuates $CD8^+$ and Th1 cell responses (11-13) and promotes the activity of Treg and myeloid derived suppressor cells (8, 11, 13, 14). In addition, dendritic cell-expressed TIM-3 dampens inflammation by enabling the phagocytosis of apoptotic cells and the cross-presentation of apoptotic cell antigens (3). It also binds the alarmin HMGB1, thereby preventing the activation of TLRs in response to released tumor cell DNA (6). Soluble TIM-3 is also reported to inhibit the response of T cells to both Ag-induced and concurrent CD3/CD28 stimulation (15). By contrast, TIM-3 interactions with Galectin-9 can trigger immune stimulatory effects, such as the coactivation of NK cell cytotoxicity (10).

References:

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