

DATASHEET

Version 20181206

TIM-3 Fc Chimera, Human

Cat. No.: Z03392-1

Size: 1.0 mg

Synonyms: T Cell Immunoglobulin Mucin-3; TIM-3

Description:

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.

Recombinant Human TIM-3 Fc Chimera produced in HEK293 cells is a polypeptide chain containing 412 amino acids with the C-terminal human IgG1 Fc fragment. A fully biologically active molecule, rhTIM-3 has a molecular mass of 60-65 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Recombinant Human EGF-R/ErbB1 Fc Chimera produced in CHO cells is a polypeptide chain containing 854 amino acids with the C-terminal human IgG1 Fc fragment. A fully biologically active molecule, rhEGF-R/ErbB1 has a molecular mass of 12-125

kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Amino Acid Sequence:

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00001 SEVEYRAEVG QNAYLPCFYT PAAPGNLVPV CWGKGACPVF
00041 ECGNVVLRTD ERDVNYWTSR YWLNQDFRKG DVSLTIENVV
00081 LADSGIYCCR IQIPGIMNDE KFNKLVIKP AKVTPAPTRQ
00121 RDTAAAFPRM LTTRGHGPAE TQTLGSLPDI NLTQISTLAN
00161 ELRDSRLAND LRDSGATIR
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Source: HEK293

Biological Activity: Activity1: Immobilized TIM-3 Fc Chimera, Human at 0.5µg/mL, the concentration of Anti-TIM3 mouse antibody (Genscript) that produces 50% optimal binding response is found to be approximately 5 ng/mL.

Activity2: Immobilized Galectin-9, His, Human at 0.5µg/mL (100 µL/well) can bind TIM-3 Fc Chimera, Human with a linear range of 0.78-6.25 µg/mL.

Molecular Weight: 60-65 kDa, observed by reducing SDS-PAGE.

Formulation: Lyophilized from a 0.2 µm filtered solution in PBS.

Reconstitution: Reconstituted in ddH₂O or PBS at 100 µg/ml.

Purity: > 95% as analyzed by reducing SDS-PAGE.

Endotoxin Level: < 0.2 EU/µg, determined by LAL method.

Storage: Lyophilized recombinant Human TIM-3 remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, Human TIM-3 should be stable 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.