Recombinant Cynomolgus Monkey Mer Fc Chimera

Catalog Number: 10576-MR

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived cynomolgus monkey Mer protein

Cynomolgus Monkey Mer (Ala23-Ala501) Accession # XP_005575320.1	IEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Ala23
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	79 kDa

SPECIFICATIONS

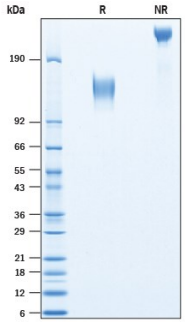
SDS-PAGE	118-140 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Cynomolgus Monkey Mer Fc Chimera (Catalog # 10576-MR) is immobilized at 2 µg/mL, 100 µL/well, Recombinant Human Protein S/PROS1 (Catalog # 9489-PS) binds with an ED_{50} of 2-10 µg/mL
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 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

SDS-PAGE



2 µg/lane of Recombinant Cynomolgus Monkey Mer Fc Chimera Protein (Catalog # 10576-MR) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 118-140 kDa and 236-280 kDa, respectively.

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BACKGROUND

Tyrosine-protein Kinase Mer, also known as c-Mer and MerTK, is a member of the receptor tyrosine kinase subfamily TAM (Tyro3, Axl, and Mer). Mature cynomolgus Mer consists of 484 amino acid (aa) extracellular domain (ECD), a 20 aa transmembrane segment, and a 472 aa cytoplasmic domain. Within the ECD, cynomolgus Mer shares 95% and 99% sequence identity with human and rhesus monkey, respectively. Similar to Axl and Tyro3, the ECD of Mer contains two Ig-like motifs and two fibronectin type III motifs. Mer is not expressed in normal B- and T-cells but is expressed in neoplastic B- and T-cell lines (1-2). It also shows higher expression in immunosuppressive M2-like macrophages (3). Mer is known to bind Gas6, Protein S, Tubby, Tubby-like protein 1 (Tulp1), and Galectin-3 (4-7). Binding of Gas6 lead to cell proliferation, migration or the prevention of apoptosis. Upon binding ligands via the Ig-like motif, Mer is dimerized to trans-autophosphorylate the kinase domain to induce downstream signaling. It has been shown that Mer signaling in macrophages induces M2 polarization, which promotes tumor growth, metastasis and evasion of anti-tumor immunity in tumor microenviroment (8). Inhibition of Mer, especially on leukocytes and macrophages, is an effective anti-cancer therapy (9).

References:

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