Biotinylated Recombinant Human Mer Fc Chimera Avi-tag

Catalog Number: AVI891

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived human Mer protein

Human Mer (Arg26-Ala499) Accession # AAB60430.1	IEGRMD	Human IgG_1 (Pro100-Lys330)	Avi-tag

N-terminus C-terminus

N-terminal Sequence Analysis

Arg26

Structure / Form

Disulfide-linked homodimer
Biotinylated via Avi-tag

Predicted Molecular Mass

78 kDa (monomer)

SPECIFICATIONS

SDS-PAGE

113 - 133 kDa, under reducing conditions.

Activity

Measured by its binding ability in a functional ELISA.
When Biotinylated Recombinant Human Mer Fc Chimera Avi-tag protein is immobilized onto a Streptavidin Coated Plate (Catalog # CP004), Recombinant Human GAS6 (Catalog # 885-GSB) bindis with an ED_{50} of 0.300-1.80 µg/mL.

The biotin to protein ratio is greater than 0.7 as determined by the HABA assay.

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.

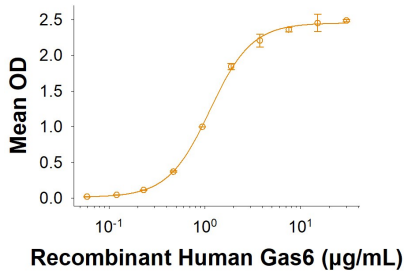
Stability & Storage

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.

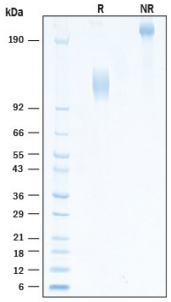
DATA

Binding Activity



Biotinylated Recombinant Human Mer Fc Chimera Avi-tag Protein Binding Activity. When Biotinylated Recombinant Human Mer Fc Chimera Avi-tag Protein (Catalog # AVI891) is immobilized onto a Streptavidin Coated Plate (Catalog # CP004), Recombinant Human Gas6 (Catalog # 885-GSB) bindis with an ED_{50} of 0.300-1.80 ug/mL.

SDS-PAGE



Biotinylated Recombinant Human Mer Fc Chimera Avi-tag Protein SDS-PAGE. 2 µg/lane of Biotinylated Recombinant Human Mer Fc Chimera Avi-tag Protein (Catalog # AVI891) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 113-133 kDa and 226-266 kDa, respectively.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Biotinylated Recombinant Human Mer Fc Chimera Avi-tag

Catalog Number: AVI891

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 human Mer consists of 485 aa extracellular domain, 21 aa transmembrane domain, and 473 aa cytoplasmic domain. Within the extracellular domain, human Mer shares 77.2% and 76.6% homology with mouse and rat Mer, respectively. Similar to Axl and Tyro3, the extracelluar domain of Mer contains two Ig-like motifs and two fibronectin type III motifs. Mer is not expressed in normal B- and T-cells but expressed in neoplastic B- and T-cell lines (1-2). It is also show 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). 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 promote 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). Our Avi-tag Biotinylated Mer Fc Chimera features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.

References:

1. Graham, D.K. *et al.* (1994) Cell Growth Differ. **5**:647.
2. Graham, D.K. *et al.* (2006) Clin. Cancer Res. **12**:2662.
3. Shibata, T. *et al.* (2014) J. Immunol. **192**:3569.
4. Nagata, K. *et al.* (1996) J. Biol. Chem. **271**:30022.
5. Uehara, H. *et al.* (2008) J. Immunol. **180**:2522.
6. Caberoy, N.B. *et al.* (2010) EMBO J. **29**:3898.
7. Caberoy, N.B. *et al.* (2012) J. Cell Physiol. **227**:401.
8. Kim, S.Y. *et al.* (2016) Sci. Rep. **6**:29673.
9. Cummings, C.T. *et al.* (2013) Clin. Cancer Res. **19**:5275.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449