

**DESCRIPTION**

<b>Source</b>	Chinese Hamster Ovary cell line, CHO-derived human Mer protein Arg20-Asp500, with a C-terminal 6-His tag Accession # Q12866.2
<b>N-terminal Sequence Analysis</b>	Arg20
<b>Predicted Molecular Mass</b>	53 kDa

**SPECIFICATIONS**

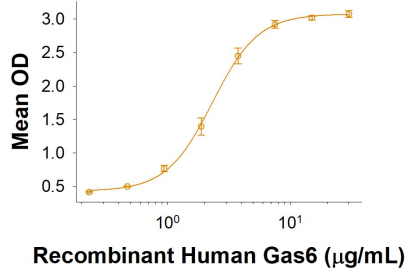
<b>SDS-PAGE</b>	95-115 kDa, under reducing conditions
<b>Activity</b>	Measured by its binding ability in a functional ELISA. When Recombinant Human Mer His-tag (Catalog # 10515-MR) is immobilized at 2 µg/mL (100 µL/well), Recombinant Human GAS6 (Catalog # 885-GSB) binds with an ED <sub>50</sub> of 1-10 µg/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 500 µg/mL in PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

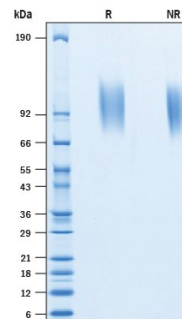
**DATA**

**Binding Activity**



When Recombinant Human Mer His-tag (Catalog # 10515-MR) is immobilized at 2 µg/mL (100 µL/well), Recombinant Human Gas6 Protein (Catalog # 885-GSB) binds with an ED<sub>50</sub> of 1-10 µg/mL.

**SDS-PAGE**



2 µg/lane of Recombinant Human Mer His-tag Protein (Catalog # 10515-MR) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 95-115 kDa.

**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 extracellular 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, Tubbby, Tubbby-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 microenvironment (8). Inhibition of Mer, especially on leukocytes and macrophages, is an effective anti-cancer therapy (9).

**References:**

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