

## DESCRIPTION

<b>Source</b>	Human embryonic kidney cell, HEK293-derived cynomolgus monkey Tie-2 protein		
	Cynomolgus Monkey Tie-2 (Ala23-Lys745) Accession # XP_005581645.1	IEGRMD	Human IgG <sub>1</sub> (Pro100-Lys330)
	N-terminus		C-terminus
<b>N-terminal Sequence Analysis</b>	Ala23		
<b>Structure / Form</b>	Disulfide-linked homodimer		
<b>Predicted Molecular Mass</b>	107 kDa		

## SPECIFICATIONS

<b>SDS-PAGE</b>	118-132 kDa, under reducing conditions
<b>Activity</b>	Measured by its binding ability in a functional ELISA. When Recombinant Cynomolgus Monkey Tie-2 Fc Chimera (Catalog # 10376-T2) is immobilized at 0.5 µg/mL (100 µL/well), Recombinant Human Angiopoietin-2 (Catalog # 623-AN) binds with an ED <sub>50</sub> of 1.5-15 ng/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>90%, 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 with Trehalose. See Certificate of Analysis for details.

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 1 mg/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>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <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 Cynomolgus Monkey Tie-2 Fc Chimera (Catalog # 10376-T2) is immobilized at 0.5 µg/mL (100 µL/well), Recombinant Human Angiopoietin-2 (Catalog # 623-AN) binds with an ED<sub>50</sub> of 1.5-15 ng/mL.

**SDS-PAGE**

2 µg/lane of Recombinant Cynomolgus Monkey Tie-2 Fc Chimera (Catalog # 10376-T2) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 118-132 kDa and 220 - 250 kDa, respectively.

## BACKGROUND

Tie-1/Tie (tyrosine kinase with Ig and EGF homology domains 1) and Tie-2/Tek comprise a receptor tyrosine kinase (RTK) subfamily with unique structural characteristics: two immunoglobulin-like domains flanking three epidermal growth factor (EGF)-like domains and followed by three fibronectin type III-like repeats in the extracellular region and a split tyrosine kinase domain in the cytoplasmic region (1). These receptors are expressed primarily on endothelial and hematopoietic progenitor cells and play critical roles in angiogenesis, vasculogenesis and hematopoiesis (2). Cynomolgus Monkey Tie-2 cDNA encodes a 1124 amino acid (aa) residue precursor protein with a 22 residue putative signal peptide, a 723 residue extracellular domain and a 354 residue cytoplasmic domain. Two ligands, angiopoietin-1 (Ang-1) and angiopoietin-2 (Ang-2), which bind Tie-2 with high-affinity have been identified. Ang-2 has been reported to act as an antagonist for Ang-1. Mice engineered to overexpress Ang-2 or to lack Ang-1 or Tie-2 display similar angiogenesis defects (3).

### References:

1. Partanen, J. and D.J. Dumont (1999) *Curr. Top. Microbiol. Immunol.* **237**:159.
2. Takakura, N. *et al.* (1998) *Immunity* **9**:677.
3. Procopio, W. *et al.* (1999) *J. Biol. Chem.* **274**:30196.