

DESCRIPTION

Source Human embryonic kidney cell, HEK293-derived cynomolgus monkey Tie-2 protein
Ala23-Lys745, with a C-terminal 6-His tag
Accession # XP_005581645.1

N-terminal Sequence Analysis Ala23

Predicted Molecular Mass 81 kDa

SPECIFICATIONS

SDS-PAGE 96-107 kDa, under reducing conditions

Activity Measured by its binding ability in a functional ELISA.
When Recombinant Cynomolgus Monkey Tie-2 His-tag (Catalog # 10341-T2) is immobilized at 1 µg/mL (100 µL/well), Recombinant Human Angiopoietin-2 (Catalog # 623-AN) binds with an ED₅₀ of 1.5-12 ng/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. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 1 mg/mL in PBS.

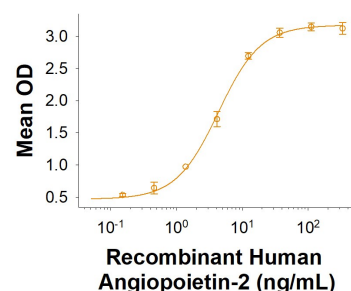
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

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.

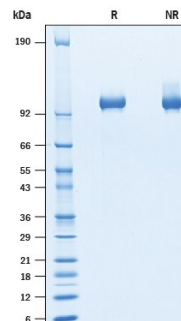
DATA

Binding Activity



When Recombinant Cynomolgus Monkey Tie-2 His-tag (Catalog # 10341-T2) is immobilized at 1 µg/mL (100 µL/well), Recombinant Human Angiopoietin-2 (Catalog # 623-AN) binds with an ED₅₀ of 1.5-12 ng/mL.

SDS-PAGE



2 µg/lane of Recombinant Cynomolgus Monkey Tie-2 His-tag (Catalog # 10341-T2) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 96-107 kDa.

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.