

#### DESCRIPTION

**Source** Mouse myeloma cell line, NS0-derived human Tie-2 protein  
Ala23-Lys745, with a C-terminal 6-His tag  
Accession # AAA61139.1

**N-terminal Sequence Analysis** Ala23

**Predicted Molecular Mass** 81 kDa

#### SPECIFICATIONS

**SDS-PAGE** 98-111 kDa, under reducing conditions

**Activity** Measured by its binding ability in a functional ELISA.  
When Recombinant Human Tie-2 His-tag (Catalog # 10457-TI) is immobilized at 0.5 µg/mL (100 µL/well), Recombinant Human Angiopoietin-2 His-tag (Catalog # 623-AN) binds with an ED<sub>50</sub> of 0.5-4 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 500 µg/mL in PBS.

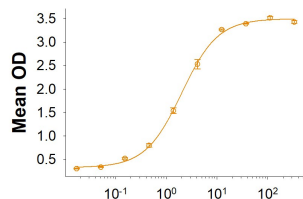
**Shipping** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**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

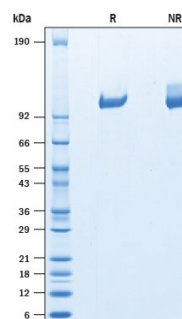
##### Binding Activity



Recombinant Human Angiopoietin-2 (ng/mL)

When Recombinant Human Tie-2 His-tag (Catalog # 10457-TI) 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 0.5-4 ng/mL.

##### SDS-PAGE



2 µg/lane of Recombinant Human Tie-2 His-tag Protein (Catalog # 10457-TI) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 98-111 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. These receptors are expressed primarily on endothelial and hematopoietic progenitor cells and play critical roles in angiogenesis, vasculogenesis and hematopoiesis. Human Tie-2 cDNA encodes a 1124 amino acid (aa) precursor protein with an 18 aa putative signal peptide, a 727 aa extracellular domain (ECD) and a 354 aa cytoplasmic domain. Human Tie-2 ECD shares 90% aa identity with mouse and rat Tie-2. Two ligands, angiopoietin1 (Ang1) and angiopoietin2 (Ang2), which bind Tie-2 with high affinity, have been identified. Ang2 has been reported to act as an antagonist for Ang1. Mice engineered to over-express Ang2 or to lack Ang1 or Tie-2 display similar angiogenesis defects.

#### 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.