

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived human Tie-2 protein			
	Human Tie-2 (Ala23-Lys745) Accession # Q02763	DIEGRMD	Human IgG ₁ (Pro100-Lys330)	6-His tag
	N-terminus		C-terminus	
N-terminal Sequence	Ala23			
Analysis				
Structure / Form	Disulfide-linked homodimer			
Predicted Molecular Mass	100 kDa (monomer)			

SPECIFICATIONS

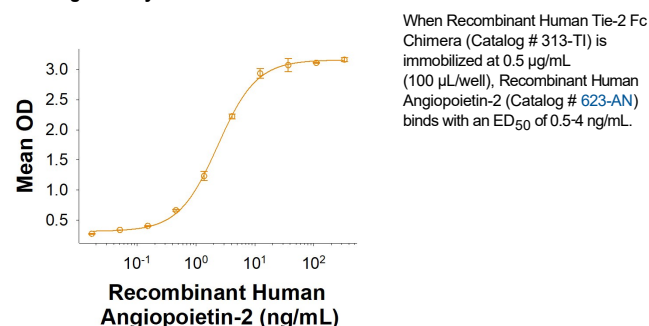
SDS-PAGE	135 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human Tie-2 Fc Chimera (Catalog # 313-TI) is immobilized at 0.5 µg/mL (100 µL/well), Recombinant Human Angiopoietin-2 (Catalog # 623-AN) binds with an ED ₅₀ of 0.5-4 ng/mL.
Endotoxin Level	<0.01 EU per 1 µg of the protein by the LAL method.
Purity	>90%, 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 100 µg/mL in sterile 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



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) residue precursor protein with an 18 residue putative signal peptide, a 727 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.

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.