

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived		
	Zebrafish Tie-2 (Val22 - His741) Accession # O73791	DIEGRMD	Human IgG ₁ (Pro100 - Lys330)
	N-terminus		C-terminus

N-terminal Sequence Analysis	Val22
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	104.4 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	122 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. Immobilized rzfTie-2/Fc Chimera at 4 µg/mL (100 µL/well) can binds rhAngiopoietin-2 with a linear range of 2-100 ng/mL.
Endotoxin Level	<0.01 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
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	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 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.

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.

Zebrafish Tie-2 cDNA encodes a 1116 amino acid (aa) residue precursor protein shares 38% sequence homology with human Tie-2 in the extracellular domain. Two ligands, angiopoietin-1 (Ang1) and angiopoietin-2 (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 overexpress 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.