

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived porcine Tie-2 protein		
	Porcine Tie-2 (Ala23-Lys746) Accession # XP_020918337.1	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Ala23		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	107 kDa		

SPECIFICATIONS

SDS-PAGE	115-133 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Porcine Tie-2 Fc Chimera (Catalog # 10488-T2) is immobilized at 0.5 µg/mL (100 µL/well), Recombinant Human Angiotensin-2 His-tag (Catalog # 623-AN) binds with an ED ₅₀ of 0.3-2.7 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	<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.

DATA

<p>Binding Activity</p> <p>When Recombinant Porcine Tie-2 Fc Chimera (Catalog # 10488-T2) is immobilized at 0.5 µg/mL (100 µL/well), Recombinant Human Angiotensin-2 His-tag (Catalog # 623-AN) binds with an ED₅₀ of 0.3-2.7 ng/mL.</p>	<p>SDS-PAGE</p> <p>2 µg/lane of Recombinant Porcine Tie-2 Fc Chimera Protein (Catalog # 10488-T2) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 115-133 kDa and 200-250 kDa, respectively.</p>
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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, 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). Porcine Tie-2 cDNA encodes a 1124 amino acid (aa) residue precursor protein that shares 94% sequence homology with human Tie-2 in the extracellular domain. Two ligands, angiotensin-1 (Ang1) and angiotensin-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 (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.