

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived canine Tie-2 protein Ala23-Lys746, with a C-terminal 6-His tag Accession # XP_005626754.1
N-terminal Sequence Analysis	Ala23
Predicted Molecular Mass	82 kDa

SPECIFICATIONS

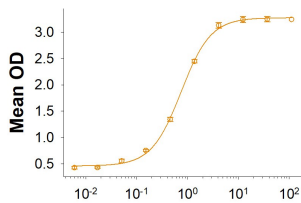
SDS-PAGE	95-105 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Canine Tie-2 His-tag (Catalog # 10781-T2) is immobilized at 0.5 µg/mL (100 µL/well), Recombinant Human Angiopoietin-2 (Catalog # 623-AN) binds with an ED ₅₀ of 0.40-3.60 ng/mL
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 with Trehalose. 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. <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

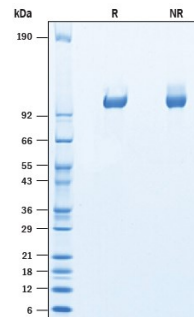
Binding Activity



Recombinant Human Angiopoietin-2 (ng/mL)

Recombinant Canine Tie-2 His-tag Protein Binding Activity When Recombinant Canine Tie-2 His-tag (Catalog # 10781-T2) is immobilized at 0.5 µg/mL (100 µL/well), Recombinant Human Angiopoietin-2 (Catalog # 623-AN) binds with an ED₅₀ of 0.40-3.60 ng/mL.

SDS-PAGE



Recombinant Canine Tie-2 His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Canine Tie-2 His-tag (Catalog # 10781-T2) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 95-105 kDa.

BACKGROUND

Tie-2, also known as Angiopoietin-1 receptor and Tek, along with the closely related Tie1, are vascular-specific receptor tyrosine kinases (RTKs) involved in angiogenesis, vascular development, and hematopoiesis (1, 2). The Tie molecules are characterized by three immunoglobulin-like domains, three epidermal growth factor (EGF)-like domains, and three fibronectin type III-like repeats in the extracellular domain (ECD) and a split tyrosine kinase domain in the cytoplasmic region (3, 4). The ECD of canine Tie-2 shares 94% amino acid sequence identity with human Tie-2. The ECD of human Tie-2 is known to be cleaved from the cell surface, releasing a ~75 kDa soluble Tie-2 (5). Tie-2 is expressed primarily on endothelial and hematopoietic progenitor cells and plays central roles in both developmental and tumor-induced angiogenesis of the adult vascular system (6). Tie receptor signaling is modulated by angiopoietins (Ang), a family secreted, multimeric growth factor ligands (2). Tie-2 signaling is activated by Ang1 and inhibited by Ang2, whereas Tie1 is considered an orphan receptor with no known ligands (7). Tie-2 and Tie1 can form heteromeric complexes in cells that express both receptors and this complex might attenuate signaling from Tie-2 (1, 8, 9). Tie-2 overexpression has been documented in breast, ovarian and hepatocellular tumors, as well as in glioblastomas and modulation of the Tie signaling pathway has been a target for the treatment of numerous diseases and cancers (10, 11).

References:

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