Data Sheet (Cat.No.TMPY-06613)

TargetMol

ANGPT2 Protein, Human, Recombinant (His & Avi), Biotinylated

General Information

Synonyms:	ANG2;angiopoietin 2;Angiopoietin-2;AGPT2
Protein Construction:	A DNA sequence encoding the human Angiopoietin-2 (NP_001138.1) (Lys275-Phe496) was expressed with a c-terminal AVI tagged polyhistidine tag at the C-terminus. The expressed protein was biotinylated in vivo by the Biotin-Protein ligase (BirA enzyme) which is co-expressed. Predicted N terminal: Lys 275
Species:	Human
Expression Host:	HEK293 Cells
Accession:	NP_001138.1
Molecular Weight:	28.72 kDa (predicted); 30.74 kDa (reducing conditions)

QC Testing

Biological Activity:	Immobilized Recombinant Human Tie2 / CD202b / TEK Protein (ECD, His Tag) at 2 μg/ml (100 μl/well) can bind Recombinant Human Angiopoietin-2 Protein (AVI & His Tag), Biotinylated, the EC50 is 300-900 ng/mL.
Purity:	> 95 % as determined by SDS-PAGE. > 95 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Angiopoietin-2 (ANG 2, or ANGPT2), is a member of the ANG family, which plays an important role in angiogenesis during the development and growth of human cancers. Both ANGPT-1 and ANGPT-2 appear to bind to the tyrosine

kinase receptor, Tie-2, found primarily on the luminal surface of endothelial cells. ANG-2's role in angiogenesis generally is considered as an antagonist for ANG1, inhibiting ANG1-promoted Tie2 signaling, which is critical for blood vessel maturation and stabilization. ANG-2 modulates angiogenesis in a cooperative manner with another important angiogenic factor, vascular endothelial growth factor A. Genetic studies have revealed that ANG-2 also is critical in lymphangiogenesis during development. ANG-2 has multiple physiologic effects that regulate vascular tone, hormone secretion, tissue growth and neural activity. Several reports indicate that ANG-2 can induce neovascularization in experimental systems due to the expression of different growth factors such as angiopoietin 2, vascular endothelial factor, and its receptor, fibroblast growth factor, platelet derived growth factor, transforming growth factor beta and epidermal growth factor. In addition, ANG-2 is strongly expressed in the vasculature of many tumors and it has been suggested that ANG-2 may act synergistically with other cytokines such as vascular endothelial growth factor to promote tumor-associated Angiogenesis and tumor progression.

Reference

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