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Angiostatin K1-3
Catalog # PVGS1050

Specification

Angiostatin K1-3 - Product Information

Primary Accession P00747

Species
Human

Sequence
Val98-Pro356

Purity
> 95% as analyzed by SDS-PAGE
> 95% as analyzed by HPLC

Endotoxin Level
< 1 EU/ µg of protein by LAL method

Biological Activity
Fully biologically active when compared to standard. The specific activity determined by an assay on anti-proliferation and anti-migration using endothelial cells in vitro and anti-angiogenesis in vivo is 5.5 × 10⁵ IU/mg.

Expression System
E. coli

Theoretical Molecular Weight
29.7 kDa

Formulation **Lyophilized from a 0.2 µm filtered solution in 20 mM NaAc, pH 5.5, 4 % mannitol.**

Reconstitution
It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml.

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at -70°C or -20°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles.

Angiostatin K1-3 - Additional Information

Gene ID 5340

Other Names
Plasminogen, 3.4.21.7, Plasmin heavy chain A, Activation peptide, Angiostatin, Plasmin heavy chain A, short form, Plasmin light chain B, PLG

Target Background
Angiostatin K1-3 is a ~30 kDa fragment of plasminogen that has been shown to act as a potent inhibitor of angiogenesis and tumor growth in vitro and in vivo. K1-3 form the “triangular bowl-like structure” of angiostatin. This structure is stabilized by interactions between inter-kringle peptides and kringles, although the kringle domains do not directly interact with each other. Angiostatin is effectively divided into two sides. The active site of K1 is found on one side, while the active sites of K2 and K3 are found on the other. This is hypothesized to result in the two different functions of angiostatin. The K1 side is believed to be primarily responsible for the inhibition of cellular proliferation, while the K2-K3 sides is believed to be primarily responsible for the inhibition of cell migration.

Angiostatin K1-3 - Protein Information

Name PLG

Function
Plasmin dissolves the fibrin of blood clots and acts as a proteolytic factor in a variety of other processes including embryonic development, tissue remodeling, tumor invasion, and inflammation. In ovulation, weakens the walls of the Graafian follicle. It activates the urokinase-type plasminogen activator, collagenases and several complement zymogens, such as C1 and C5. Cleavage of fibronectin and laminin leads to cell detachment and apoptosis. Also cleaves fibrin, thrombospondin and von Willebrand factor. Its role in tissue remodeling and tumor invasion may be modulated by CSPG4. Binds to cells.

Cellular Location
Secreted. Note=Locates to the cell surface where it is proteolytically cleaved to produce the active plasmin. Interaction with HRG tethers it to the cell surface

Tissue Location
Present in plasma and many other extracellular fluids. It is synthesized in the liver

Angiostatin K1-3 - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Angiostatin K1-3 - Images