10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Angiostatin K1-3

Catalog # PVGS1050

Product Information

Primary Accession	P00747
Species	Human
Sequence	Val98-Pro356
Purity	> 95% as analyzed by SDS-PAGE > 95% as analyzed by HPLC
Endotoxin Level	
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 5.5×10^5 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.

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.

Protein Information

Name	PLG (HGNC:9071)
Function	[Plasmin]: Protease which primary function is to degrade fibrin, the main component of blood clots (PubMed:6094526, PubMed:6919539). Also cleaves other components of blood clots like thrombospondin-1/THBS1 and von Willebrand factor (VWF) (PubMed:24449821, PubMed:7679575). Can also directly and/or through the activation of other proteases degrade the various components of the extracellular matrix including collagen, fibronectin and laminin (PubMed:14699093, PubMed:28849762, PubMed:9171346). Thereby, regulates a variety of biological processes including embryonic development, tissue remodeling, and inflammation (PubMed:9171346). In ovulation, weakens the walls of the Graafian follicle (By similarity). In vitro, it is also able to cleave several complement zymogens, such as C1, C4 and C5 (PubMed:6447255).
Cellular Location	[Plasmin]: Secreted. Note=Locates to the cell surface where it is proteolytically cleaved to produce the active plasmin (PubMed:14699093). Interaction with HRG tethers it to the cell surface (PubMed:15613921, PubMed:19712047, PubMed:9102401)
Tissue Location	Present in plasma and many other extracellular fluids. It is synthesized in the liver

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.