

# Angiostatin K1-3

Catalog # PVGS1050

## Product Information

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<b>Primary Accession Species</b>	<a href="#">P00747</a> Human
<b>Sequence</b>	Val98-Pro356
<b>Purity</b>	> 95% as analyzed by SDS-PAGE > 95% as analyzed by HPLC
<b>Endotoxin Level Biological Activity</b>	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 $5.5 \times 10^5$ IU/mg.
<b>Expression System</b>	E. coli
<b>Theoretical Molecular Weight</b>	29.7 kDa
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in 20 mM NaAc, pH 5.5, 4 % mannitol.
<b>Reconstitution</b>	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.
<b>Storage &amp; Stability</b>	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

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<b>Gene ID</b>	5340
<b>Other Names</b>	Plasminogen, 3.4.21.7, Plasmin heavy chain A, Activation peptide, Angiostatin, Plasmin heavy chain A, short form, Plasmin light chain B, PLG
<b>Target Background</b>	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

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<b>Name</b>	PLG
<b>Function</b>	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, C4 and C5 (PubMed: <a href="#">6447255</a> ). 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.
<b>Cellular Location</b>	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
<b>Tissue Location</b>	Present in plasma and many other extracellular fluids. It is synthesized in the liver

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