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# Angiostatin K1-4

*Angiostatin Kringles 1-4 Human*
*NTP0005*

## Product Overview

| | |
|---|---|
| Name | Angiostatin K1-4 |

**Description**

Angiostatin Kringles 1-4 Human

**Introduction**

There are several proteolytic fragments or specific domains of proteins that act as inhibitors of angiogenesis. These include fragments of plasminogen such as Angiostatin protein kringles 1-4 and kringles 1-5, Endostatin, Restin, PEX, the N-terminal fragment of prolactin, and the Nterminally truncated platelet factor. Angiostatin is a proteolytic protein fragment of plasminogen that is comprised of the first 4 kringle regions. Angiostatin k1-4 prevents the growth of endothelial cells, and its systemic administration inhibits the growth of primary carcinomas in mice. Angiostatin Kringles 1-3 segment has a larger inhibitory activity than the Angiostatin kringles 1-4 fragment. The protease-activated angiostatin kringles 1-5 is the most potent plasminogen fragment with over 50 times larger endothelial cell specific inhibitory activity. Angiostatin kringles 1-5 systemic administration inhibits growth of fibrosarcoma and significantly reduces neovascularization. Angiostatin is an angiogenesis inhibitor in mouse serum and urine. Angiostatin is a 38 kDa protein fragment of the plasminogen composed of the 1st 4 kringle domains of plasminogen. Angiostatin K1-4 is also named plasminogen kringles 1-4 and PK1-4. Angiostatin protein is manufactured by the protelytic cleavage of plasminogen by a serine protease from several prostate carcinoma cell lines. The manufacturing of angiostatin by pancreatic cancer cells can be inhibited by TGF-beta 1 along with plasminogen activator inhibitor type-1 (PAI1).

**Source**

Human Fluid.

**Physical Appearance**

Sterile Filtered lyophilized powder.

**Formulation**

Lyophilized from a (1mg/ml) solution in containing 20mM Hepes buffer pH-8.2 & 20mM NaCl.

**Stability**

Lyophilized Angiostatin Kringles 1-4 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Angiostatin Kringles1-4 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

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**Purity**

Greater than 98.0% as determined by SDS-PAGE.

**Biological Activity**

Human Angiostatin Kringles 1-4 significantly inhibits basic-FGF induced endothelial cell proliferation and migration at concentration ranging from 300nM-1.0 uM.

**Solubility**

It is recommended to reconstitute the lyophilized Angiostatin K1-4 in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Precautions**

Angiostatin K1-4 is for research use only and not for use in diagnostic or therapeutic procedures.