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Certificate of Analysis and Data Sheet

Human Angiostatin Kringles 1-4

Catalog No.
228-10052

Source
Human Fluid.

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).

Description

Human Angiostatin kringles 1-4 is produced from Human Fluid is a glycosylated polypeptide chain which migrates as a doublet 50 kDa on SDS-PAGE.

The Ang K1-4 is purified by proprietary chromatographic techniques.

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.

The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.



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Solubility

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

Stability

Lyophilized Angiostatin Kringles 1-4 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Angiostatin Kringles 1-4 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.

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 μ M.

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