



Endostatin Human Recombinant Protein

Product Data Sheet

Cat. No.:	A12480020	A12480100	A12481000
Size:	20 µg	100 µg	1 mg

Description

Our bioactive *Endostatin Human Recombinant Protein*, produced in *E. coli*, is a single, non-glycosylated, polypeptide with a predicted molecular mass of 20 kDa. The Endostatin is purified by proprietary chromatographic techniques.

Summary

Collagen XVIII is an important extracellular matrix component that is expressed in basement membranes. Degradation of Type XVIII collagen results in the generation of endostatin (ES), a 20-kDa C-terminal fragment. Endostatin has been shown to act as a potent inhibitor of angiogenesis and tumor growth *in vitro* and *in vivo*. Endostatin induces tyrosine phosphorylation of Shc (SH₂ domain adapter protein) leading to specific inhibition in endothelial cell proliferation.

Once a cluster of cancer cells reaches a diameter of about 1–2 mm, it must develop a blood supply in order to grow larger as diffusion is no longer adequate to supply the cancerous cells with oxygen and nutrients and to remove wastes. Therefore, these cells secrete substances that promote the formation of new blood vessels (angiogenesis), which are vital for the growth and persistence of solid tumors and their metastases. The production of several angiogenic factors (FGF-a, FGF-b, VEGF and VPF) is upregulated by tumors in order to stimulate angiogenesis. However, numerous malignant tumors also generate inhibitors of angiogenesis which include angiostatin and thrombospondin. The angiogenic phenotype is basically the end result of a net balance between the positive and negative regulators of neovascularization mentioned above. Endostatin's role is to inhibit endothelial proliferation, therefore it is an effective angiogenesis inhibitor.

Type

Recombinant Protein

Source

E. coli

update.: 06.2023

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Formulation

Sterile-filtered liquid solution formulated with 30mM Sodium acetate buffer and Mannitol, pH-5.5.

Purity

Purity greater than 95.0% as determined by SDS-PAGE.

Biological Activity

The activity was found to be 16,000 IU/mg (may vary slightly by lot, please refer to the datasheet enclosed with the product).

Shipping

Ships on blue ice packs. Upon receipt, store the product at the temperature recommended below.

Storage/Expiration

Endostatin should be stored at 2-8° C. **Do NOT freeze!**

Usage

This product is intended for **Laboratory Research Use Only**. Not for use in diagnostic or therapeutic procedures. This product may not be used as a pharmaceutical or veterinary drug, agricultural product, or food additive.

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