ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Recombinant Human Endostatin

Cat. ENST13-R-100	Recombinant Human Endostatin protein	**SIZE**: 100 ug
Cat. ENST13-R-250	Recombinant Human Endostatin protein	**SIZE**: 250 ug
Cat. ENST13-R-1000	Recombinant Human Endostatin protein	**SIZE**: 1 mg

Embryonic vascular system undergoes a series of complex, highly regulated series of events involving differentiation, migration and association of primitive endothelial cells. This process is termed vasculogenesis. A further remodeling of the primitive vascular system forms the mature cardiovascular system. This process is known as angiogenesis (sprouting of new capillary vessels from pre-existing vasculature). Angiogenesis accounts for the formation of vasculature into previously avascular organs such as brain and kidney. Angiogenic activity in the adult is required during the normal tissue repair, and for the remodeling of the female reproductive organs (ovulation and placental development). Certain pathological conditions, such as tumor growth and diabetic retinopathy, also require angiogenesis.

Recent studies have identified several proteolytic fragments or cryptic 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, C-terminal proteolytic fragment of Collagen XVIII (**Endostatin** protein), the NC10 domain of collagen 15 (**Restin**), the C-terminal hemopexin-like domain of MMP-2 (**PEX**), the N-terminal fragment of prolactin, and the N-terminally truncated platelet factor. The 20 kDa fragment of Collagen XVIII known as **Endostatin** protein inhibits tumor progression and induction of endothelial cell apoptosis. Administration of Endostatin protein to mice bearing certain tumors caused tumor regression without the development of drug resistance. Endostatin protein also inhibited systemic angiogenesis, primary tumor growth, and the development of primary metastatic lesions. It also reduced the levels of antiapoptotic proteins Bcl-2 and Bcl-xL and an increase in apoptosis of endothelial cells. in vitro.

Source & Storage

Human endostatin was expressed in Pichia pastoris and purified to >95% by SDS-PAGE (mol wt. 20 kDa). It is provided in PBS, pH 7.4 in liquid at 1 mg/ml (100 ug/100 ul) or lyophilized. The **lyophilized products** should be reconstituted in water at a concn of 1 mg/ml. (Add water or a desired buffer and lightly vortex and mix for 15 min at room temp). It can then be used or aliquoted for storage in small aliquots at -70oC or below.

Biological activity: 30 ug of Endostatin injected subcutaneously once daily for 11 days resulted in 76% inhibition growth of metastases in the B16BL6 murine metastasis model.

General References:

Peterson Te et al (1990) JBC 265, 6104-6111; Forsgren m et al (1987) FEBS Lett. 213, 254-260; Malinowski DP et al (1984) Biochemistry 23, 4243-4250; O'Reilly MS et al (1994) Cell 79, 315-328; Sim BK et al (1997) Cancer Res. 57, 1329-1334; Wu Z et al (1997) BBRC 236, 651;

2. Citations for ADI Antibodies (see updates at the web site)

*This product is for in vitro research use only.

Related material available from ADI

Antibodies to Ang-1, Ang-2, Angiostatin, Endostatin, Recombinant Mouse and Human VEGFs, Anti-Tie-1 and Tie-2, Anti-flk-1, Flt-1, and Flt-4 (VEGFRs 1-3)

ENST13-R-100-250-1000 71221A

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