ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Human Angiostatin Kringles 1-3

□ **Cat. #** ANKR131-R	Recombinant (E. coli) Human Angiostatin Kringles 1-3 purified protein	**SIZE**: 50 ug
□ **Cat. #** ANKR131-R-250	Recombinant (E. coli) Human Angiostatin Kringles 1-3 purified protein	**SIZE**: 250 ug

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. **Angiostatin** protein, a proteolytic fragment of plasminogen, is comprised of the first four kringle regions. It prevents the growth of endothelial cells, and its systemic administration inhibits the growth of primary carcinomas in mice. **Kringles 1-3 fragment has a greater inhibitory activity than the Kringles** 1-4 fragment. The protease-activated **Kringles 1-5** is the most potent plasminogen fragment with over 50-fold greater endothelial cell specific inhibitory activity. Its systemic administration inhibited the growth of fibrosarcoma and significantly reduced neovascularization.

Source of Antigen

Human Angiostatin Kringles 1-3 was expressed in E. coli and purifed (>95%), mol wt ~30 Kda). Purified protein is supplied in 20mM NaAc, pH5.5, 4% mannitol (or see lot sp. conc on the vial) or lyophilized form. It is recommend to store all products at 4oC for short term use. The **lyophilized products** should be reconstituted in water, lightly vortex and mix for 15 min at room temp). It is advisable to add 0.1% albumin (bovine or human) as carrier protein. It should be immediately aliquoted and stored -70oC or below. It is stable for up to 1 year.

Specificity & Biological activity

Endotoxin: <1 EU/mg protein)

Biological activity: The activity is assayed on anti-proliferation and anti-migration of endothelial cells in vitro and anti-angiogenesis in vivo. The specific activity of anti-migration of endothelial cells in vitro is 55,000 Units/mg.

General References: O'Reilly MS (1994) Cell 79, 315, Cao E (1999) PNAS 96, 5728; Cao Y (1997) JBC, 272, 22924; Peterson T (1990) JBC 265, 6104; Forsgren M (1987) FEBS Lett. 213, 254; Malinowski DP (1984) Biochemistry 23, 4243-4250; Sim BK (1997) Cancer Res. 57, 1329; Wu Z (1997) BBRC 236, 651.

*This product is for in vitro research use only.

Related material available from ADI

Catalog#	ProdDescription
ANGN108-P	Human Angiogenin 108-123 aa peptide
ANGN12-A	Anti-Human Angiogenin protein IgG #1, IgG aff pure
ANGN12-C	Recombinant purified Human Angiogenin protein W. blot +ve control
ANGN15-R-50	Recombinant (E. coli) purified Human Angiogenin protein, biologically active
ANKR131-C	Human Recombinant (E. coli) Angiostatin Kringles 1-3 purified protein W. blot +ve positive control
ANKR131-R-250	Human Recombinant (E. coli) Angiostatin Kringles 1-3 purified protein biologically active
ANKR131-R-50	Human Recombinant (E. coli) Angiostatin Kringles 1-3 purified protein biologically active
ANKR13-M	Mouse Monoclonal Anti-human Angiostatin (Kringles 1-3) IgG #3
ANST11-S	Anti-Human Angiostatin (Kringles 1-4) protein antiserum
ANST12-C	Purified Human Angiostatin (Kringles 1-4) protein W. Blot +ve control
ANST12-M	Mouse Monoclonal Anti-Human Angiostatin (kringles 1-4) IgG #2
ENST11-A	Anti-Human Endostatin IgG, aff pure
ENST11-C	Recombinant purified Human Endostatin protein W. Blot Positive control
ENST11-S	Anti-Human Endostatin antiserum
ENST12-C	Recombinant purified Mouse Endostatin protein W. Blot Positive control
ENST13-R-100	Recombinant purified Human Endostatin protein (P. Pastoris) biologically active
ENST15-R-100	Recombinant purified Mouse Endostatin protein (P. Pastoris) biologically active, low endotoxin
PLMN11-C	Purified Human Plasminogen protein W. Blot Positive control
PLMN11-M	Monoclonal Anti-Human Plasminogen protein IgG
PLMN12-A	Anti-Human plasminogen protein IgG, aff pure, unlabeled
PLMN12-BT	Anti-Human plasminogen protein IgG, Biotin conjugate
PLMN12-HRP	Anti-Human plasminogen protein IgG, HRP conjugate
PLMN15-N	Purified Human Plasminogen protein biologically active

ANKR131-R-50-250 140502A

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