

Product Specification Sheet

Human Angiostatin Kringles 1-3

Cat. # ANKR13-M	Mouse monoclonal Anti-Human Kringles 1-3 IgG	SIZE: 100 ug
Cat. # ANKR131-C	Purified Human Kringles 1-3 protein W. Blot +ve control	SIZE: 100 ul

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. **Kringle 1-3 fragment has a greater inhibitory activity than the Kringle 1-4 fragment.** The protease-activated **Kringle 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.

Purified human Kringles 1-3 (mol wt ~38 kDa, non-reducing) is prepared from individual that have been negative for HBsAg, HIV, and HCV. It is >95% pure as determined by SDS-PAGE. Purified Kringles 1-3 is free from plasmin or plasminogen.

Source of Antigen

Antigen	Recombinant purified human angiostatin kringles 1-3 protein. Epitope location ~ unknown
Ab Host/type	Mouse, monoclonal IgG2a purified from mouse ascites
2Ab Format	Cat # 40320, goat anti-mouse IgG-HRP (AP, biotin, FITC conjugates also available).
-ve Control	# 20008-1, Mouse (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Recombinant purified human angiostatin kringles 1-3 protein (purity >95%, ~38 kDa) for **WB +ve control, Cat # ANKR131-C**, is formulated in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **ANKR131-C** for good visibility with antibody Cat # **ANKR13-M** Store at -20oC in suitable size aliquots. SDS may

crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **ANKR131-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution lyophilized powder

Supplied in **Buffer:** PBS+0.1% BSA

Reconstitute powder in PBS at 1 mg/ml

Storage

Short-term: unopened, undiluted liquid vials at -20oC and powder at 4oC or -20oC..

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Suggested Uses

ELISA: use at 0.5-2 ug/ml using 100-200 ng coated protein/well.

Western: 1-3 ug/ml. This antibody detects 10-50 ng recombinant protein.

Specificity & Cross-reactivity

ANKR13-M has poor reactivity with mouse K1-3. Other species no tested. The use of human recombinant K1-3 protein control, cat # ANKR131-C, is recommended for western.

General References: O'Reilly MS et al (1994) Cell 79, 315-328, Cao E et al (1999) PNAS 96, 5728; Cao Y et al (1997) JBC, 272, 22924; 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; ; Sim BK et al (1997) Cancer Res. 57, 1329-1334; Wu Z et al (1997) BBRC 236, 651.

*This product is for in vitro research use only.

Related material available from ADI

Angiogenin and VEGF ELISA kits
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)

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