

Product Specification Sheet

**Mouse Monoclonal Anti-Human Angiostatin**

<b>Cat. ANST12-M</b>	Mouse Monoclonal Anti-Human Angiostatin protein IgG #2	<b>SIZE:</b> 100 ug
<b>Cat. ANST12-C</b>	Purified Human Angiostatin protein WB +ve control # 2	<b>SIZE:</b> 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 kringles 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 and Antibodies**

<b>Antigen</b>	Purified <b>angiostatin protein (kringles 1-4)</b> protein (~50 Kda)
<b>Ab Host/type</b>	Balb/c <b>mouse</b> . Splenocytes were fused with Sp2/0 myeloma cells. Resulting clone (designated ANST12, isotype IgG1), selected for reactivity with ANST, was expanded into mice as <b>ascites</b> . Antibody has been purified by Protein A/G column chromatography.
<b>2-Ab</b>	Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available))
<b>-ve control IgG</b>	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

**Human angiostatin protein (kringles 1-4) for WB +ve control, Cat # ANST12-C**, is formulated in SDS-PAGE sample buffer (reduced). This preparation is biologically inactive. It is not suitable for ELISA or other applications where native protein

is required. It is supplied in 100 ul/vial. For WB, heat once and load 10 ul/lane and visualize with appropriate antibodies. This preparation is intended for qualitative purpose and not to serve as standard of known concentration. Store frozen in suitable aliquots. Do not freeze, thaw, or heat repeatedly.

**Form & Storage of Antibodies/Peptide Control**

**Affinity pure IgG**

100 ug/500ul solution  
Supplied in **Buffer:** PBS, pH 7.4 and 50% glycerol

**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.

**Recommended Usage**

**Western Blotting** (1-5 ug/ml for affinity pure using Chemiluminescence technique). Human angiostatin (kringles 1-4) is ~ 50 kDa.

**ELISA** (1:10K-1:100K; using 50-100 ng of control peptide/well).

**Histochemistry & Immunofluorescence:** Not tested. We recommend the use of affinity purified antibody at 2-20 ug/ml in formaldehyde fixed tissue.

**Specificity & Cross-reactivity**

Anti-human angiostatin reacts poorly with mouse and rat proteins. Antibody crossreactivity in various species is not established. Human angiostatin W. blot +ve control (ANST12-C) should be used as a control. At high antibody concentration, this antibody reacts with plasminogen. The presence of small amounts of plasminogen in antibody solution will eliminate reactivity with plasminogen.

**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.

**Citations of ADI's antibodies for Angiogenesis related products** (see updated list 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)

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