

Product Specification Sheet

Human Angiostatin Antibodies

Cat. ANST11-S	Rabbit Anti-Human Angiostatin protein antiserum	SIZE: 100 ul
Cat. ANST12-C	Purified Human Angiostatin protein WB +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. 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

Antigen	Angiostatin protein (~50 kDa; kringles 1-4) is prepared from individual that have been negative for HBsAg, HIV, and HCV. It is >95% pure as determined by SDS-PAGE. Purified protein is free from plasmin or plasminogen. Purified human angiostatin was injected into rabbits to produce antibodies (cat ANST12-S)
Ab Host/type	Rabbit, polyclonal antiserum (cat #ANST11-S)
2-ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available)
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Human angiostatin protein for WB +ve control, Cat # ANST12-C, is formulated in SDS-PAGE sample buffer (reduced). This preparation is not 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. Angiostatin (K1-4) protein is ~50 kDa. Store frozen in suitable aliquots. Do not freeze, thaw, or heat repeatedly.

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide

Reconstitute powder in 100 ul PBS

Storage

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

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

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum using Chemiluminescence technique). Human angiostatin 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

Antibody crossreactivity in various species is not established. Human Angiostatin W. blot +ve control (ANST12-C) should be used as a control.

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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