

Product Specification Sheet

Angiopoietin-2 (Ang-2) Antibodies

Cat. ANG21-S	Rabbit Anti-Mouse Ang-2 Antiserum # 1	SIZE: 100 ul
Cat. ANG21-A	Rabbit Anti-Mouse Ang-2 IgG # 1 (aff pure)	SIZE: 100 ug
Cat. ANG21-P	Mouse Ang-2 Control/blocking peptide # 1	SIZE: 100 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).

Angiopoietin-1 is an angiogenic secreted protein that interact with endothelial specific Tie-2 receptor. It is primarily expressed in developing endothelial cells. During embryonic development, Ang-1 binds and induces tyrosine phosphorylation of Tie-2. Ang-1 may play a critical role in heart development. A homolog of Ang-1, termed **Angiopoietin-2** (mouse and human **Ang-2**, 496 AA; ~85% identity) has recently been identified. It may act an antagonist for Ang-1 and Tie-2. Ang-1 and Ang-2 have ~60% sequence homology. It is prominently expressed in tissues that are involved in vascular remodeling (ovary, placenta, and uterus).

Source of Antigen and Antibodies

Antigen	20-aa peptide of Mouse Ang-2; Designated (ANG21-P or control peptide) conjugated to KLH. Epitope location ~ N-terminal
Ab Host/type	Rabbit, polyclonal Unpurified antiserum (cat # ANG21-S) Aff pure IgG (cat #ANG21-A)
2-ab	Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

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

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

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 and 1-10 ug/ml for affinity pure using ECL). The predicted size of Ang-2 is ~55 kDa. Like Ang-1, its size may appear higher on PAGE gels due to glycosylation (1). See refs 2

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

Histochemistry & Immunofluorescence: We recommend the use of affinity pure antibody at 2-20 ug/ml (see refs 2).

Specificity & Cross-reactivity

The ANG21-P control immunogenic peptide sequences is 100% conserved in rat, 85% in pig, 73% in human, and 55% in chicken Ang-2. Ang-2 control peptide has no significant sequence homology with Ang-1, Ang-3, ang-4 or ARPs. Antibody cross-reactivity in various species has not been studied. The control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at:the web site).

General References: Maisonpierre C et al (1997) Science 277, 55; Davis S et al (1996) Cell 87, 1161-1169; Nomura N et al (1994) DNA Res. 1, 27-35; Suri, S et al (1996) Cell 87, 1171; Davis, SI (1996) Cell 87, 1161.

(2) Citations of ADI's Antibodies for Ang-2

Yuan Hai Tao, 2002, Kidney Intl.. 61(6):2078-2089, **WB, IHC**
Oka N, 2005, BJU Int. 95, 660-663, **IHC**; **Shoji T**, 2006, Diabetes, 55: 2245 - 2255, **IHC**; **Shiojima I**, 2005, J. Clin. Invest.115: 2108 - 2118, **WB**; **Lash GE**, 2006, J. Leukoc. Biol., 80, 572-590, **IHC**; **Zheng W**, 2004, AJP Heart Circ Physiol, 286: 1994, **WB**; **Lei Li**, 2004, Circulation, 110: 796 - 802, **WB**; **Hayashi T**, 2003, J. Cerebral Blood Flow & Metabol 23:166-180, **IHC**; **Matsuoka-Sakata A**, 2006, Reproduction, 131: 351 - 360., **WB**; **Dedkov EI**, 2006, Am J Physiol Heart Circ Physiol, 291: H1686-H1693, **WB**

*This product is for in vitro research use only.

ANG21-S-A-P

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