

Product Specification Sheet

Angiopoietin-1 (Ang-1) Antibodies

Cat. ANG11-S	Rabbit Anti-Mouse Ang-1 Antiserum # 1	SIZE: 100 ul
Cat. ANG11-A	Rabbit Anti-Mouse Ang-1 IgG # 1 (aff pure)	SIZE: 100 ug
Cat. ANG11-P	Mouse Ang-1 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 (mouse and human **Ang-1**; 498 AA; ~ 98% identity) 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 appears to play a crucial role in mediating matrix and mesenchyme. It mediates blood vessel maturation and stability. Ang-1 may play a critical role in heart development. Ang-1 deficient mice mimic the phenotype exhibited by animals deficient in Tie-2. 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.

Source of Antigen and Antibodies

Antigen	20-aa peptide from mouse Ang-1 (1) KLH conjugate (Cat. ANG11-P). Epitope location ~ N-terminus
Ab Host/type	Rabbit, polyclonal Unpurified antiserum Cat # ANG11-S and Aff pure IgG (cat #ANG11-A)
2ab	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

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 Chemiluminescence technique). Expected size of Ang-1 is ~55 kDa. An antibody made to Ang-1 epitope has detected ~ 70 kDa glycosylated, secreted protein in the conditioned media from cells expressing recombinant Ang-1 (1). (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 (refs 2).

Specificity & Cross-reactivity

The ANG11-P control immunogenic peptide sequences is 90% conserved in human, 95% in pig, rat and bovine Ang-1. Ang-1 control peptide has no significant sequence homology with Ang-2. Antibody cross-reactivity in various species has not been studied. 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: (1) Davis S (1996) Cell 87, 1161; Nomura N (1994) DNA Res. 1, 27-35; Suri, S (1996) Cell 87, 1171; Davis, S (1996) cell 87, 1161; Maisonpierre C et al (1997) Science 277, 55.

(2) Citations of ADI's Antibodies (see web site for updated list)

Yuan Hai Tao, 2002 Kidney Intl. 61:2078, WB, IHC
Long, D A, 2001, J Am Soc Nephrol 12: 2721, WB, IHC
Zheng W, 2004, Am J Physiol Heart Circ Physiol. 286: 1994, WB
Krikun G, 2002, Am. j. Pathol. 161, 979, WB, IHC
Hayashi, T. 2003, J. Cerebral Blood Flow & Metabol. 23:166, IHC
Long, DA, 2001, J Am Soc Nephrol 2001 12: 2721, WB, IHC

**This product is for in vitro research use only.*

Related material available from ADI

ANG11-S-A-P

71216S

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