

Product Specification Sheet

Angiopoietin-3 (Ang-3) Antibodies

- Cat. ANG31-M** Rat monoclonal Anti-Mouse Ang-3 IgG # 1 **SIZE:** 100 ug
- Cat. ANG31-C** Mouse Ang-3 protein control for Western blot **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).

A homology-based cloning approach has led to the identification of **angiopoietin-3** (Angpt3, 509 aa, chromosome 2) in mouse, and **angiopoietin-4** (ANGPT4, 504 aa, chromosome 20p13) in human. Although angiopoietin-3 and angiopoietin-4 are more structurally diverged from each other than are the mouse and human versions of angiopoietin-1 and angiopoietin-2, they appear to represent the mouse and human counterparts of the same gene locus, as revealed in chromosomal localization studies of all the angiopoietins in mouse and human. Angiopoietin-3 was expressed as multiple mouse tissues, whereas angiopoietin-4 was expressed primarily in human lung. It is also suggested that angiopoietin-3 acts as an antagonist, whereas angiopoietin-4 functions as an agonist.

Source of Antigen and Antibodies

Antigen	Recombinant Mouse Ang-3 protein
Ab Host/type	Rat, monoclonal, IgG2b Purified IgG (cat #ANG31-M)
2-ab	Goat Anti-Rat IgG-HRP conjugate Cat # 50320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20005-1, Rat (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Mouse Ang-3 (1-509 aa, Davis et al 1996)) was expressed as a fusion protein containing a his-tag at the C-terminus in mouse NSO cells and purified (>95%). Recombinant protein calculated mol wt is ~58 kDa but the protein migrates as 3 bands ~85-90 kDa band (reducing SDS-PAGE) due to glycosylation. **For WB +ve control**, Cat # ANG31-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 (#ANG31-M etc). 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 control solution prior to heating and loading on gels. 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/100ul solution lyophilized powder

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

Reconstitute powder in PBS at 1mg/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.

Recommended Usage

Western Blotting (1-3 ug/ml 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.

ELISA (0.1-1 ug/ml ins direct ELISA or for to capture Ang-2 in ELISA.

Histochemistry & Immunofluorescence: not tested.

Specificity & Cross-reactivity

The ANG31-M reacts with mouse ang-3. No significant reactivity is observed with other Ang (1, 2, 4). Antibody cross-reactivity in various species has not been studied. Recombinant purified mouse ang-3 protein is available for control studies.

General References:

Nishimura M (1999) FEBS Lett. 448, 254-256; Kim I (1999) FEBS Lett. 443, 353-356; Valenzuela DM (1999) PNAS 96, 1904-1909.

*This product is for in vitro research use only.

Related material available from ADI

Antibodies to Ang-1, Ang-2 , Ang-2 ELISA kit

ANG31-M-C 71221A

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