

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse Angiopoietin-1 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human (rh) Angiopoietin-2 and rhAngiopoietin-4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Angiopoietin-1 Ser20-Phe498 Accession # Q5HYA0
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

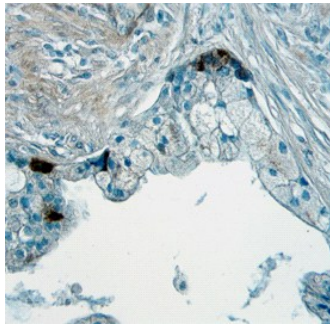
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the [Technical Information](#) section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human Angiopoietin-1 (Catalog # 923-AN)
Immunohistochemistry	5-15 µg/mL	See Below

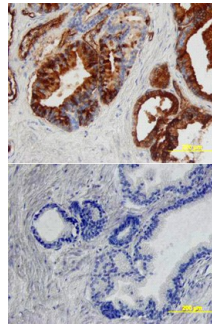
DATA

Immunohistochemistry



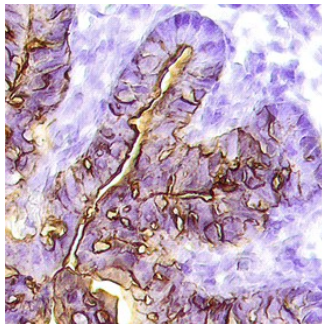
Angiopoietin-1 in Human Prostate Cancer Tissue. Angiopoietin-1 was detected in immersion fixed paraffin-embedded sections of human prostate cancer tissue using 15 µg/mL Goat Anti-Human/Mouse Angiopoietin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF923) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Immunohistochemistry



Angiopoietin-1 in Human Prostate. Angiopoietin-1 was detected in immersion fixed paraffin-embedded sections of human prostate array using Goat Anti-Human/Mouse Angiopoietin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF923) at 5 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Immunohistochemistry



Angiopoietin-1 in Mouse Embryo. Angiopoietin-1 was detected in perfusion fixed frozen sections of mouse embryo (15 d.p.c.) using Goat Anti-Human/Mouse Angiopoietin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF923) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to endothelium in the loop of the midgut. View our protocol for [Chromogenic IHC Staining of Frozen Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Angiopoietin-1 (Ang-1) and Angiopoietin-2 (Ang-2) are two closely related secreted ligands which bind with similar affinity to Tie-2, a receptor tyrosine kinase with immunoglobulin and epidermal growth factor homology domains expressed primarily on endothelial cells and early hematopoietic cells. Tie-2 and angiopoietins have been shown to play critical roles in embryogenic angiogenesis and in maintaining the integrity of the adult vasculature (1).

Ang-1 cDNA encodes a 498 amino acid (aa) residue precursor protein that contains a coiled-coiled domain near the amino-terminus and a fibrinogen-like domain at the C-terminus. Human Ang-1 shares approximately 97% and 60% amino acid sequence identity with mouse Ang-1 and human Ang-2, respectively (1, 2). Ang-1 activates Tie-2 signaling on endothelial cells to promote chemotaxis, cell survival, cell sprouting, vessel growth and stabilization (1, 3, 4). Ang-2 has alternatively been reported to be an antagonist for Ang-1 induced Tie-2 signaling as well as an agonist for Tie-2 signaling, depending on the cell context (5).

References:

1. Jones, N. *et al.* (2001) *Nat. Rev. Mol. Cell Biol.* **2**:257.
2. Davis, S. *et al.* (1996) *Cell* **87**:1161.
3. Witzanbichler, B. *et al.* (1998) *J. Biol. Chem.* **273**:18514.
4. Papapetropoulos, A. *et al.* (1999) *Lab. Invest.* **79**:213.
5. Teichert-Kuliszewska, K. *et al.* (2001) *Cardiovasc. Res.* **49**:659.