

# ANG I (C-1): sc-74528



The Power to Question

## BACKGROUND

Angiogenesis is defined as the process of neovascularization and formation of new blood vessels from the established micro-circulation. Angiogenin (ANG or ANG I) is a non-glycosylated polypeptide, 123 amino acids in length, whose function is central to this process. ANG I shows a high degree of homology with known ribonucleases such as pancreatic ribonuclease A, and the capacity of ANG I to induce blood vessel growth is critically dependent on its ribonucleolytic activity. ANG I is thought to be involved in the development of solid tumors, and ANG I antagonists are capable of inhibiting tumor growth. By a poorly understood mechanism, ANG I is endocytosed by subconfluent endothelial cells and translocated to the nucleus where it accumulates in the nucleolus. The ANG I receptor has not yet been identified.

## CHROMOSOMAL LOCATION

Genetic locus: ANG (human) mapping to 14q11.2; Ang (mouse) mapping to 14 C1.

## SOURCE

ANG I (C-1) is a mouse monoclonal antibody raised against amino acids 25-147 of ANG I of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ANG I (C-1) is available conjugated to agarose (sc-74528 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74528 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74528 PE), fluorescein (sc-74528 FITC), Alexa Fluor® 488 (sc-74528 AF488), Alexa Fluor® 546 (sc-74528 AF546), Alexa Fluor® 594 (sc-74528 AF594) or Alexa Fluor® 647 (sc-74528 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74528 AF680) or Alexa Fluor® 790 (sc-74528 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

ANG I (C-1) is recommended for detection of precursor and mature ANG I of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ANG I siRNA (h): sc-39291, ANG I siRNA (m): sc-39292, ANG I shRNA Plasmid (h): sc-39291-SH, ANG I shRNA Plasmid (m): sc-39292-SH, ANG I shRNA (h) Lentiviral Particles: sc-39291-V and ANG I shRNA (m) Lentiviral Particles: sc-39292-V.

Molecular Weight of ANG I: 14 kDa.

Positive Controls: ANG I (h): CHO Lysate: sc-110020, rat lung extract: sc-2396 or Hep G2 cell lysate: sc-2227.

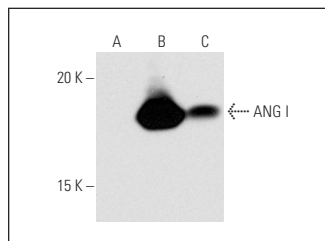
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

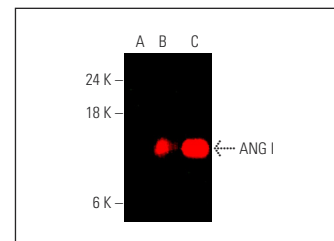
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



ANG I (C-1): sc-74528. Western blot analysis of ANG I expression in non-transfected CHO: sc-117750 (A), human ANG I transfected CHO: sc-110020 (B) and Hep G2 (C) whole cell lysates.



ANG I (C-1): sc-74528. Near-infrared western blot analysis of ANG I expression in non-transfected CHO: sc-117750 (A), human ANG I transfected CHO: sc-110020 (B) and Hep G2 (C) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.

## SELECT PRODUCT CITATIONS

- Schaafhausen, M.K., et al. 2013. Tumor angiogenesis is caused by single melanoma cells in a manner dependent on reactive oxygen species and NFκB. *J. Cell Sci.* 126: 3862-3872.
- Zhang, G., et al. 2014. Validation and clinicopathologic associations of a urine-based bladder cancer biomarker signature. *Diagn. Pathol.* 9: 200.
- Bárcena, C., et al. 2015. Angiogenin secretion from hepatoma cells activates hepatic stellate cells to amplify a self-sustained cycle promoting liver cancer. *Sci. Rep.* 5: 7916.
- Xu, L., et al. 2016. ANG promotes proliferation and invasion of the cell of lung squamous carcinoma by directly up-regulating HMGA2. *J. Cancer* 7: 862-871.
- Wei, Z., et al. 2017. Coding and noncoding landscape of extracellular RNA released by human glioma stem cells. *Nat. Commun.* 8: 1145.
- Fu, J.L., et al. 2018. Suppression of COUP-TFII upregulates angiogenin and promotes angiogenesis in endometriosis. *Hum. Reprod.* E-published.
- Jeong, S.J., et al. 2019. A threonyl-tRNA synthetase-mediated translation initiation machinery. *Nat. Commun.* 10: 1357.
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- Su, Z., et al. 2019. Angiogenin generates specific stress-induced tRNA halves and is not involved in tRF-3-mediated gene silencing. *J. Biol. Chem.* E-published.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

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