

# Ang-2 (F-1): sc-74403



The Power to Question

## BACKGROUND

Tie-1 and Tie-2 (also designated Tek) are novel cell surface receptor tyrosine kinases. The extracellular domain of Tie-1 has an unusual multidomain structure consisting of a cluster of three epidermal growth factor homology motifs localized between two immunoglobulin-like loops, which are followed by three Fibronectin type III repeats next to the transmembrane region. Angiopoietin-1 (Ang-1) is a secreted ligand for Tie-2. Preliminary biochemical analyses of Ang-1 reveal a potential Fibrinogen-like domain at the carboxy terminus and coiled-coil regions in the amino terminus. Ang-1 is an angiogenic factor that is thought to be involved in endothelial development. A related protein, angiopoietin-2 (Ang-2), has been identified as a naturally occurring antagonist of Ang-1 activation of Tie-2. In adult tissue, Ang-2 expression seems to be restricted to sites of vascular remodeling.

## CHROMOSOMAL LOCATION

Genetic locus: ANGPT2 (human) mapping to 8p23.1.

## SOURCE

Ang-2 (F-1) is a mouse monoclonal antibody raised against amino acids 171-240 mapping within an internal region of the mature chain of Ang-2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Ang-2 (F-1) is available conjugated to agarose (sc-74403 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74403 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74403 PE), fluorescein (sc-74403 FITC), Alexa Fluor® 488 (sc-74403 AF488), Alexa Fluor® 546 (sc-74403 AF546), Alexa Fluor® 594 (sc-74403 AF594) or Alexa Fluor® 647 (sc-74403 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74403 AF680) or Alexa Fluor® 790 (sc-74403 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Ang-2 (F-1) is recommended for detection of precursor and mature Ang-2 of 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), immunohistochemistry (including paraffin-embedded sections) (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-2 siRNA (h): sc-39305, Ang-2 shRNA Plasmid (h): sc-39305-SH and Ang-2 shRNA (h) Lentiviral Particles: sc-39305-V.

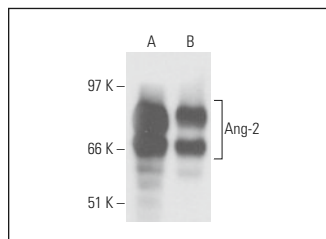
Molecular Weight of Ang-2 glycosylation: 62-70 kDa.

Positive Controls: HUV-EC-C whole cell lysate: sc-364180, TF-1 cell lysate: sc-2412 or HEL 92.1.7 cell lysate: sc-2270.

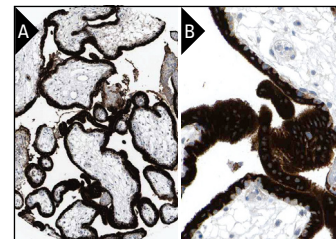
## STORAGE

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

## DATA



Ang-2 (F-1): sc-74403. Western blot analysis of Ang-2 expression in HUV-EC-C (A) and TF-1 (B) whole cell lysates.



Ang-2 (F-1): sc-74403. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

## SELECT PRODUCT CITATIONS

1. Srirajskanthan, R., et al. 2009. Circulating angiopoietin-2 is elevated in patients with neuroendocrine tumours and correlates with disease burden and prognosis. *Endocr. Relat. Cancer* 16: 967-976.
2. Leu, J.G., et al. 2012. The effects of gold nanoparticles in wound healing with antioxidant epigallocatechin gallate and  $\alpha$ -lipoic acid. *Nanomedicine* 8: 767-775.
3. Bernsmeier, C., et al. 2015. Patients with acute-on-chronic liver failure have increased numbers of regulatory immune cells expressing the receptor tyrosine kinase MERTK. *Gastroenterology* 148: 603-615.
4. Ferrari, G., et al. 2016. Angiopoietin 2 expression in the cornea and its control of corneal neovascularisation. *Br. J. Ophthalmol.* 100: 1005-1010.
5. Gravina, G.L., et al. 2017. The brain-penetrating CXCR4 antagonist, PRX177561, increases the antitumor effects of bevacizumab and sunitinib in preclinical models of human glioblastoma. *J. Hematol. Oncol.* 10: 5.
6. Gutbier, B., et al. 2018. Prognostic and pathogenic role of angiopoietin-1 and -2 in pneumonia. *Am. J. Respir. Crit. Care Med.* 198: 220-231.
7. Dusart, P., et al. 2019. A systems-based map of human brain cell-type enriched genes and malignancy-associated endothelial changes. *Cell Rep.* 29: 1690-1706.
8. Zhou, H., et al. 2020. The proangiogenic effects of extracellular vesicles secreted by dental pulp stem cells derived from periodontally compromised teeth. *Stem Cell Res. Ther.* 11: 110.
9. Chatterjee, A., et al. 2020. Role of the Ang-2-Tie2 axis in vascular damage driven by high glucose or nucleoside diphosphate kinase B deficiency. *Int. J. Mol. Sci.* 21: 3713.

## RESEARCH USE

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