

Ang-2 (H-11): sc-74402

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; Angpt2 (mouse) mapping to 8 A1.3.

SOURCE

Ang-2 (H-11) 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 IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

Ang-2 (H-11) is recommended for detection of precursor and mature Ang-2 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-2 siRNA (h): sc-39305, Ang-2 siRNA (m): sc-39306, Ang-2 shRNA Plasmid (h): sc-39305-SH, Ang-2 shRNA Plasmid (m): sc-39306-SH, Ang-2 shRNA (h) Lentiviral Particles: sc-39305-V and Ang-2 shRNA (m) Lentiviral Particles: sc-39306-V.

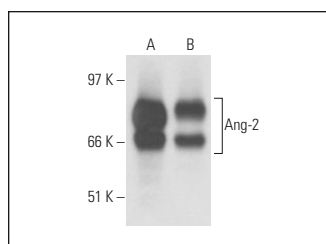
Molecular Weight of Ang-2: 62-70 kDa.

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.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Ang-2 (H-11): sc-74402. Western blot analysis of Ang-2 expression in HUV-EC-C (A) and TF-1 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Li, C., et al. 2016. Overexpression of angiopoietin 2 promotes the formation of oral squamous cell carcinoma by increasing epithelial-mesenchymal transition-induced angiogenesis. *Cancer Gene Ther.* 23: 295-302.
- Yu, X., et al. 2018. TSLP/TSLPR promote angiogenesis following ischemic stroke via activation of the PI3K/Akt pathway. *Mol. Med. Rep.* 17: 3411-3417.
- He, R., et al. 2019. Rapeseed protein-derived peptides, LY, RALP, and GHS, modulates key enzymes and intermediate products of renin-angiotensin system pathway in spontaneously hypertensive rat. *NPJ Sci. Food* 3: 1.
- Gevariya, N., et al. 2021. ω-3 eicosapentaenoic acid reduces prostate tumor vascularity. *Mol. Cancer Res.* 19: 516-527.
- Kim, H.K., et al. 2021. E-cadherin and angiopoietin-2 as potential biomarkers for colorectal cancer with peritoneal carcinomatosis. *Anticancer Res.* 41: 4497-4504.
- Deluque, A.L., et al. 2022. Paricalcitol improves the angiopoietin/Tie-2 and VEGF/VEGFR2 signaling pathways in adriamycin-induced nephropathy. *Nutrients* 14: 5316.

RESEARCH USE

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

CONJUGATES

See **Ang-2 (F-1): sc-74403** for Ang-2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.