SANTA CRUZ BIOTECHNOLOGY, INC.

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.

REFERENCES

- Partanen, J., et al. 1992. A novel endothelial cell surface receptor tyrosine kinase with extracellular epidermal growth factor homology domains. Mol. Cell. Biol. 12: 1698-1707.
- Dumont, D.J., et al. 1992. Tek, a novel tyrosine kinase gene located on mouse chromosome 4, is expressed in endothelial cells and their presumptive precursors. Oncogene 7: 1471-1480.

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.

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 μ g per 100-500 μ g 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 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 (H-11): sc-74402. Western blot analysis of Ang-2 expression in HUV-EC-C (\bf{A}) and TF-1 (\bf{B}) whole cell lysates.

SELECT PRODUCT CITATIONS

- 1. 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.
- 4. 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.

PROTOCOLS

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



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.