SANTA CRUZ BIOTECHNOLOGY, INC.

Axin (S-20): sc-8567

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

β-catenin is a component of both the cadherin cell adhesion system and the Wnt signaling pathway. Wnt signaling increases the amount of β-catenin by preventing its ubiquitination and degradation, allowing its direct interaction with transcription factors of the lymphoid enhancer factor/T cell factor family, and modulation of gene expression. Axin is involved in the degradation of β-catenin by acting as a scaffold to form a complex between β-catenin, adenomatous polyposis coli (APC) and GSK-3β. APC, which is phosphorylated by GSK-3β, induces degradation of β-catenin, thus inhibiting Wnt signal transduction. Conductin is 45% identical to Axin and appears to play a similar role to Axin in the Wnt signaling pathway.

REFERENCES

1. Hulsken, J., et al. 1994. E-cadherin and APC compete for the interaction with β-catenin and the cytoskeleton. J. Cell Biol. 127: 2061-2069.
2. Behrens, J., et al. 1996. Functional interaction of β-catenin with the transcription factor LEF-1. Nature 382: 638-642.

CHROMOSOMAL LOCATION

Genetic locus: AXIN1 (human) mapping to 16p13.3; Axin1 (mouse) mapping to 17 A3.3.

SOURCE

Axin (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Axin of rat origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8567 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Axin (S-20) is recommended for detection of Axin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 Axin siRNA (h): sc-41449, Axin siRNA (m): sc-41450, Axin shRNA Plasmid (h): sc-41449-SH, Axin shRNA Plasmid (m): sc-41450-SH, Axin shRNA (h) Lentiviral Particles: sc-41449-V and Axin shRNA (m) Lentiviral Particles: sc-41450-V.

Molecular Weight of Axin: 95 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa nuclear extract: sc-2120 or SK-N-SH cell lysate: sc-2410.

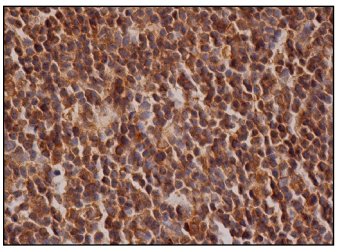
RESEARCH USE

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



Axin (S-20): sc-8567. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic and nuclear staining of cells in germinal and non-germinal centers.

SELECT PRODUCT CITATIONS

1. Hocevar, B.A., et al. 2003. Regulation of the Wnt signaling pathway by disabled-2 (Dab2). EMBO J. 22: 3084-3094.
2. Lu, Z., et al. 2008. Protein encoded by the Axin(Fu) allele effectively down-regulates Wnt signaling but exerts a dominant negative effect on c-Jun N-terminal kinase signaling. J. Biol. Chem. 283: 13132-13139.
3. Guo, X., et al. 2008. Axin and GSK3-control Smad3 protein stability and modulate TGF-signaling. Genes Dev. 22: 106-120.
4. Li, Q., et al. 2009. Axin determines cell fate by controlling the p53 activation threshold after DNA damage. Nat. Cell Biol. 11: 1128-1134.
5. Guo, H.L., et al. 2012. The Axin/TNKS complex interacts with KIF3A and is required for Insulin-stimulated GLUT4 translocation. Cell Res. 22: 1246-1257.
6. Ruan, K., et al. 2012. PLK1 interacts and phosphorylates Axin that is essential for proper centrosome formation. PLoS ONE 7: e49184.
7. Deng, Y.Z., et al. 2012. RACK1 suppresses gastric tumorigenesis by stabilizing the β-catenin destruction complex. Gastroenterology 142: 812-823.

PROTOCOLS

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