SANTA CRUZ BIOTECHNOLOGY, INC.

Axin (H-98): sc-14029

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 (H-98) is a rabbit polyclonal antibody raised against amino acids 646-743 mapping near the C-terminus of Axin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Axin (H-98) 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), 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 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 whole cell lysate: sc-2200 or SK-N-SH cell lysate: sc-2410.

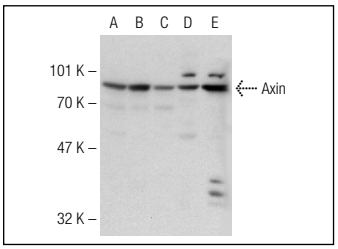
STORAGE

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

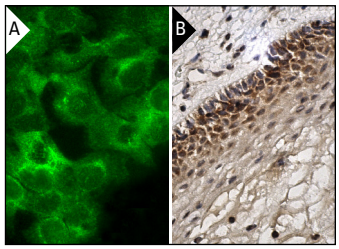
RESEARCH USE

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

DATA



Axin (H-98): sc-14029. Western blot analysis of Axin expression in K-562 (**A**), HeLa (**B**) and SK-N-SH (**C**) whole cell lysates and Hep G2 (**D**) and K-562 (**E**) nuclear extracts.



Axin (H-98): sc-14029. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cervix tissue showing cytoplasmic staining of squamous epithelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Matsubayashi, H., et al. 2004. Biochemical characterization of the *Drosophila* wingless signaling pathway based on RNA interference. Mol. Cell. Biol. 24: 2012-2024.
2. Lee, N.P., et al. 2004. Zyxin, axin, and Wiskott-Aldrich syndrome protein are adaptors that link the cadherin/catenin protein complex to the cytoskeleton at adherens junctions in the seminiferous epithelium of the rat testis. J. Androl. 25: 200-215.
3. Chin, H.J., et al. 2010. Omacor, n-3 polyunsaturated fatty acid, attenuated albuminuria and renal dysfunction with decrease of SREBP-1 expression and triglyceride amount in the kidney of type II diabetic animals. Nephrol. Dial. Transplant. 25: 1450-1457.
4. Casagolda, D., et al. 2010. A p120-catenin-CK1ε complex regulates Wnt signaling. J. Cell Sci. 123: 2621-2631.
5. Gustafson, B. and Smith, U. 2010. Activation of canonical wingless-type MMTV integration site family (Wnt) signaling in mature adipocytes increases β-catenin levels and leads to cell dedifferentiation and Insulin resistance. J. Biol. Chem. 285: 14031-14041.
6. Del Valle-Pérez, B., et al. 2011. Coordinated action of CK1 isoforms in canonical Wnt signaling. Mol. Cell. Biol. 31: 2877-2888.
7. Dao, K.H., et al. 2013. The PI3K/Akt1 pathway enhances steady-state levels of FANCL. Mol. Biol. Cell 24: 2582-2592.