

Axin (AT1A4): sc-517389

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-3 β . APC, which is phosphorylated by GSK-3 β , 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

- 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.
- Behrens, J., et al. 1996. Functional interaction of β -catenin with the transcription factor LEF-1. *Nature* 382: 638-642.
- Aberle, H., et al. 1997. β -catenin is a target for the ubiquitin-proteasome pathway. *EMBO J.* 16: 3797-3804.
- Zeng, L., et al. 1997. The mouse fused locus encodes Axin, an inhibitor of the Wnt signaling pathway that regulates embryonic axis formation. *Cell* 90: 181-192.
- Behrens, J., et al. 1998. Functional interaction of an Axin homolog, Conductin, with β -catenin, APC and GSK-3 β . *Science* 280: 596-599.

CHROMOSOMAL LOCATION

Genetic locus: AXIN1 (human) mapping to 16p13.3.

SOURCE

Axin (AT1A4) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 546-752 of Axin of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Axin (AT1A4) is recommended for detection of Axin of human origin by Western Blotting (starting dilution 1:200, 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 Axin siRNA (h): sc-41449, Axin shRNA Plasmid (h): sc-41449-SH and Axin shRNA (h) Lentiviral Particles: sc-41449-V.

Molecular Weight of Axin: 95 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

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.

PROTOCOLS

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