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AXIN1 Antibody

Catalog # ASC11217

Product Information

Application	WB, IF, E
Primary Accession	O15169
Other Accession	AAC51624, 2252820
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	95635
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	AXIN1 antibody can be used for detection of AXIN1 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunoflourescence starting at 20 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	8312
Other Names	Axin-1, Axis inhibition protein 1, hAxin, AXIN1, AXIN
Target/Specificity	AXIN1;
Reconstitution & Storage	AXIN1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	AXIN1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	AXIN1
Synonyms	AXIN
Function	Component of the beta-catenin destruction complex required for regulating CTNNB1 levels through phosphorylation and ubiquitination, and modulating Wnt-signaling (PubMed:12192039, PubMed:27098453, PubMed:28829046). Controls dorsoventral patterning via two opposing effects; down-regulates CTNNB1 to inhibit the Wnt signaling pathway and ventralize embryos, but also dorsalizes embryos by activating a Wnt-independent JNK signaling pathway (PubMed:12192039). In Wnt signaling, probably facilitates the phosphorylation of CTNNB1 and APC by GSK3B (PubMed:12192039).

	Enhances TGF-beta signaling by recruiting the RNF111 E3 ubiquitin ligase and promoting the degradation of inhibitory SMAD7 (PubMed:16601693). Also a component of the AXIN1-HIPK2-TP53 complex which controls cell growth, apoptosis and development (PubMed:17210684). Facilitates the phosphorylation of TP53 by HIPK2 upon ultraviolet irradiation (PubMed:17210684). Activates the AMP-activated protein kinase (AMPK) in response to calorie restriction by acting as a molecular adapter: recruited to late endosome membrane by the V-ATPase complex downstream of TULP3, and mediates association between STK11 and its AMPK substrates PRKAA1 and/or PRKAA2, leading to AMPK activation (By similarity).
Cellular Location	Cytoplasm. Nucleus. Membrane {ECO:0000250|UniProtKB:O35625} Cell membrane {ECO:0000250|UniProtKB:O35625}. Late endosome {ECO:0000250|UniProtKB:O35625}. Note=MACF1 is required for its translocation to cell membrane (By similarity). On UV irradiation, translocates to the nucleus and colocalizes with DAAX (PubMed:17210684). {ECO:0000250|UniProtKB:O35625, ECO:0000269|PubMed:17210684}
Tissue Location	Ubiquitously expressed.

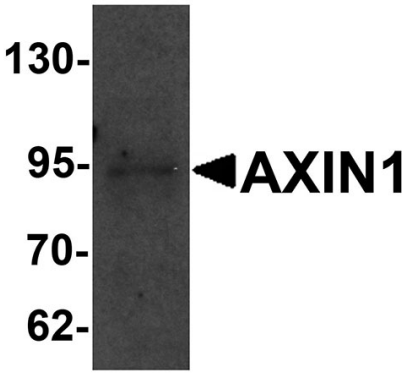
Background

AXIN1 Antibody: AXIN1 is a cytoplasmic protein which contains a regulation of G-protein signaling (RGS) domain and a dishevelled and axin (DIX) domain and is thought to function as a negative regulator of the WNT signaling pathway that regulates embryonic axis formation. AXIN1 interacts with adenomatosis polyposis coli (APC), beta-catenin, glycogen synthase kinase 3 beta, forming a tetrameric complex resulting in the regulation of the stabilization of beta-catenin. Mutations in the AXIN1 gene have been associated various carcinomas, indicating that it also functions as a tumor suppressor.

References

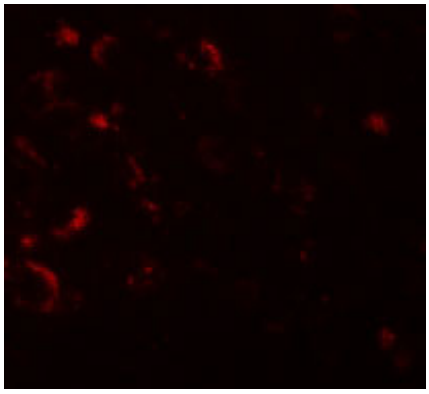
Zeng L, Fagotto F, Zhang T, et al. The mouse Fused locus encodes Axin, an inhibitor of the Wnt signaling pathway that regulates embryonic axis formation. Cell1997; 90:181-92.
Kishida S, Yamamoto H, Ikeda S, et al. Axin, a negative regulator of the wnt signaling pathway, directly interacts with adenomatous polyposis coli and regulates the stabilization of beta-catenin. J. Biol. Chem.1998; 273:10823-6.
Nakamura T, Hamada F, Ishidate T, et al. Axin, an inhibitor of the Wnt signaling pathway, interacts with beta-catenin, GSK-3beta and APC and reduces the beta-catenin level. Genes Cells1998; 3:395-403.
Salahshor S and Woodgett JR. The links between axin and carcinogenesis. J. Clin. Pathol.2005; 58:225-36.

Images



Western blot analysis of AXIN1 in SK-N-SH cell lysate with AXIN1 antibody at 1 µg/mL.

Immunofluorescence of AXIN1 in human brain tissue



with AXIN1 antibody at 20 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.