


Product datasheet

Anti-Axin 1 antibody ab93119

Overview

Product name	Anti-Axin 1 antibody
Description	Rabbit polyclonal to Axin 1
Host species	Rabbit
Tested applications	Suitable for: ELISA, WB
Species reactivity	Reacts with: Recombinant fragment Predicted to work with: Sea urchin 
Immunogen	Synthetic peptide corresponding to C-terminal residues of Green Sea Urchin (<i>Lytechinus variegatus</i>) Axin 1.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.01% Sodium Azide Constituents: 50% Glycerol, PBS
Purity	Immunogen affinity purified
Purification notes	>90%
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab93119** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ELISA		1/2000 - 1/5000.
WB		Use a concentration of 1 µg/ml. Predicted molecular weight: 96 kDa. This antibody has been tested in Western blot against the recombinant peptide used as an immunogen. We have no data on detection of endogenous protein.

Target

Function	Component of the beta-catenin destruction complex required for regulating CTNNB1 levels through phosphorylation and ubiquitination, and modulating Wnt-signaling. 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. In Wnt signaling, probably facilitates the phosphorylation of CTNNB1 and APC by GSK3B. Likely to function as a tumor suppressor. Facilitates the phosphorylation of TP53 by HIPK2 upon ultraviolet irradiation. Enhances TGF-beta signaling by recruiting the RNF111 E3 ubiquitin ligase and promoting the degradation of inhibitory SMAD7. Also component of the AXIN1-HIPK2-TP53 complex which controls cell growth, apoptosis and development.
Tissue specificity	Ubiquitously expressed.
Involvement in disease	Hepatocellular carcinoma Caudal duplication anomaly
Sequence similarities	Contains 1 DIX domain. Contains 1 RGS domain.
Domain	The tankyrase-binding motif (also named TBD) is required for interaction with tankyrase TNKS and TNKS2.
Post-translational modifications	Phosphorylation and dephosphorylation of AXIN1 regulates assembly and function of the beta-catenin complex. Phosphorylated by CK1 and GSK3B. Dephosphorylated by PPP1CA and PPP2CA. Phosphorylation by CK1 enhances binding of GSK3B to AXIN1. ADP-ribosylated by tankyrase TNKS and TNKS2. Poly-ADP-ribosylated protein is recognized by RNF146, followed by ubiquitination at 'Lys-48' and subsequent activation of the Wnt signaling pathway. Ubiquitinated by RNF146 when poly-ADP-ribosylated, leading to its degradation and subsequent activation of the Wnt signaling pathway. Sumoylation at Lys-857 and Lys-860 prevents ubiquitination and degradation. Sumoylation is required for AXIN1-mediated JNK activation. Deubiquitinated by USP34, deubiquitinated downstream of beta-catenin stabilization step: deubiquitination is important for nuclear accumulation during Wnt signaling to positively regulate beta-catenin (CTNBB1)-mediated transcription.
Cellular localization	Cytoplasm. Nucleus. Membrane. Cell membrane. MACF1 is required for its translocation to cell membrane (By similarity). On UV irradiation, translocates to the nucleus and colocalizes with DAAX (PubMed:17210684).

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