


## Product datasheet

# Anti-Axin 1 antibody ab93119

### Overview

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

### Properties

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

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<b>Function</b>	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.
<b>Tissue specificity</b>	Ubiquitously expressed.
<b>Involvement in disease</b>	Hepatocellular carcinoma Caudal duplication anomaly
<b>Sequence similarities</b>	Contains 1 DIX domain. Contains 1 RGS domain.
<b>Domain</b>	The tankyrase-binding motif (also named TBD) is required for interaction with tankyrase TNKS and TNKS2.
<b>Post-translational modifications</b>	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.
<b>Cellular localization</b>	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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