

## Product datasheet

# Anti-Axin 1 antibody ab133221

1 Image

### Overview

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<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> IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide, corresponding to a 14 amino acid sequence near the C terminal end of Human Axin 1.
<b>Positive control</b>	Human skin tissue.
<b>General notes</b>	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at -20°C or -80°C. Avoid freeze / thaw cycle. Store undiluted.
<b>Storage buffer</b>	pH: 7.4 Preservative: 0.02% Sodium azide Constituent: 98% PBS
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

### Applications

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**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab133221 in the following tested applications.

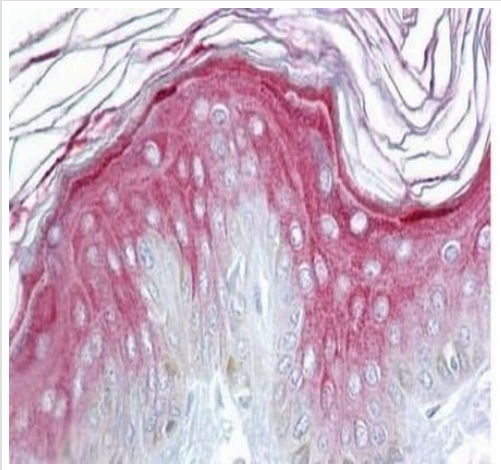
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

## Target

<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).

## Images



Immunohistochemical analysis of formalin fixed, paraffin embedded Human skin labelling Axin 1 with ab133221 at 5 ug/ml, followed by biotinylated goat anti-rabbit IgG secondary antibody, alkaline phosphatase-streptavidin and chromogen.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Axin 1 antibody (ab133221)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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