

Product datasheet

Anti-beta Catenin antibody ab6302

★★★★★ 24 Abreviews 119 References 6 Images

Overview

Product name	Anti-beta Catenin antibody
Description	Rabbit polyclonal to beta Catenin
Host species	Rabbit
Specificity	Reacts in dot blot with beta-catenin peptide 768-781 conjugated to BSA. In immunoblots, reacts with a 94kD protein in extracts of Madin-Darby Bovine Kidney (MDBK) cultured cells. Specific staining is inhibited following pre-incubation of the antiserum with the beta-catenin peptide. Shows no reactivity with BSA conjugated alpha catenin peptide (amino acids 890-901). The antibody does not cross react with a-catenin or ?-catenin (plakoglobin).
Tested applications	Suitable for: ICC/IF, Dot blot, IHC-Fr, WB, IHC-P, IHC - Wholmount
Species reactivity	Reacts with: Mouse, Rat, Sheep, Horse, Chicken, Dog, Human, Pig, Xenopus laevis, Zebrafish, Botryllus schlosseri
Immunogen	Synthetic peptide: PGDSNQLAWFDTDL conjugated to KLH, corresponding to amino acids 768-781 of Human or mouse β Catenin. (Peptide available as ab16377) Run BLAST with Run BLAST with
Positive control	MDBK cells.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.097% Sodium azide Constituent: Whole serum
Purity	Whole antiserum
Purification notes	Delipidized antiserum.
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab6302** 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
ICC/IF	★★★★★	1/2000. PubMed: 18624906
Dot blot		1/4000.
IHC-Fr	★★★★★	1/2000.
WB	★★★★★	1/4000. Predicted molecular weight: 94 kDa.
IHC-P	★★★★★	Use at an assay dependent concentration.
IHC - Wholemout	★★★★★	1/200.

Target

Function

Key downstream component of the canonical Wnt signaling pathway. In the absence of Wnt, forms a complex with AXIN1, AXIN2, APC, CSNK1A1 and GSK3B that promotes phosphorylation on N-terminal Ser and Thr residues and ubiquitination of CTNNB1 via BTRC and its subsequent degradation by the proteasome. In the presence of Wnt ligand, CTNNB1 is not ubiquitinated and accumulates in the nucleus, where it acts as a coactivator for transcription factors of the TCF/LEF family, leading to activate Wnt responsive genes.

Involved in the regulation of cell adhesion. The majority of beta-catenin is localized to the cell membrane and is part of E-cadherin/catenin adhesion complexes which are proposed to couple cadherins to the actin cytoskeleton.

Tissue specificity

Expressed in several hair follicle cell types: basal and peripheral matrix cells, and cells of the outer and inner root sheaths. Expressed in colon.

Involvement in disease

Defects in CTNNB1 are associated with colorectal cancer (CRC) [MIM:114500].

Note=Activating mutations in CTNNB1 have oncogenic activity resulting in tumor development.

Somatic mutations are found in various tumor types, including colon cancers, ovarian and prostate carcinomas, hepatoblastoma (HB), hepatocellular carcinoma (HCC). HBs are malignant embryonal tumors mainly affecting young children in the first three years of life.

Defects in CTNNB1 are a cause of pilomatrixoma (PTR) [MIM:132600]; a common benign skin tumor.

Defects in CTNNB1 are a cause of medulloblastoma (MDB) [MIM:155255]. MDB is a malignant, invasive embryonal tumor of the cerebellum with a preferential manifestation in children.

Defects in CTNNB1 are a cause of susceptibility to ovarian cancer (OC) [MIM:167000]. Ovarian cancer common malignancy originating from ovarian tissue. Although many histologic types of ovarian neoplasms have been described, epithelial ovarian carcinoma is the most common form. Ovarian cancers are often asymptomatic and the recognized signs and symptoms, even of late-stage disease, are vague. Consequently, most patients are diagnosed with advanced disease.

Note=A chromosomal aberration involving CTNNB1 is found in salivary gland pleiomorphic adenomas, the most common benign epithelial tumors of the salivary gland. Translocation t(3;8) (p21;q12) with PLAG1.

Sequence similarities

Belongs to the beta-catenin family.

Contains 12 ARM repeats.

Post-translational modifications

Phosphorylation by GSK3B requires prior phosphorylation of Ser-45 by another kinase.

Phosphorylation proceeds then from Thr-41 to Ser-37 and Ser-33.

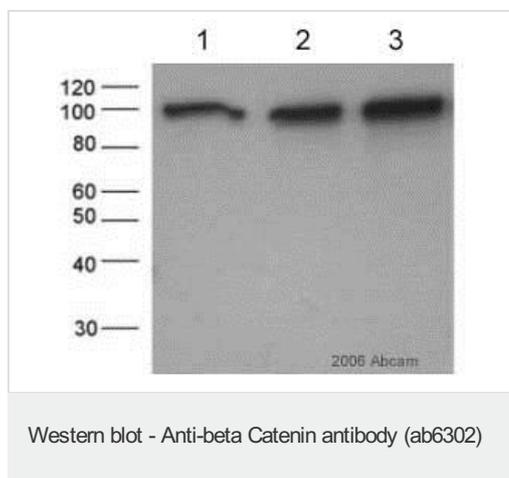
EGF stimulates tyrosine phosphorylation. Phosphorylation on Tyr-654 decreases CDH1 binding and enhances TBP binding.

Ubiquitinated by the SCF(BTRC) E3 ligase complex when phosphorylated by GSK3B, leading to its degradation. Ubiquitinated by a E3 ubiquitin ligase complex containing UBE2D1, SIAH1, CACYBP/SIP, SKP1, APC and TBL1X, leading to its subsequent proteasomal degradation.

Cellular localization

Cytoplasm. Nucleus. Cytoplasm > cytoskeleton. Cell junction > adherens junction. Cell junction. Cell membrane. Cytoplasmic when it is unstabilized (high level of phosphorylation) or bound to CDH1. Translocates to the nucleus when it is stabilized (low level of phosphorylation). Interaction with GLIS2 and MUC1 promotes nuclear translocation. Interaction with EMD inhibits nuclear localization.

Images



All lanes : Anti-beta Catenin antibody (ab6302) at 1/4000 dilution

Lane 1 : 5ug human lung tumour lysate.

Lane 2 : 10ug human lung tumour lysate.

Lane 3 : 20ug human lung tumour lysate.

Secondary

All lanes : Goat anti-Rabbit IgG (H&L)HRP

Performed under reducing conditions.

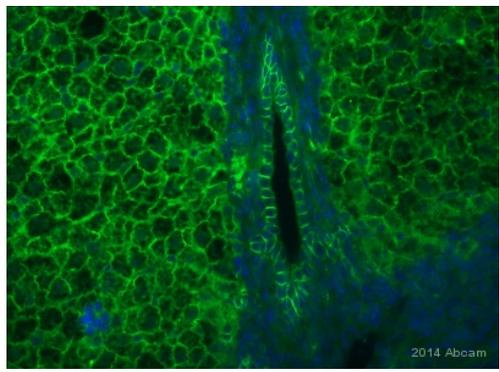
Predicted band size: 94 kDa

Observed band size: 95 kDa

[why is the actual band size different from the predicted?](#)

Exposure time: 10 seconds

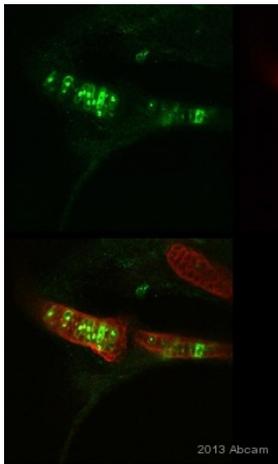
This image is courtesy of an Abreview submitted by **Mike Campa** on **4 April 2006**.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta Catenin antibody (ab6302)

This image is courtesy of an anonymous Abreview.

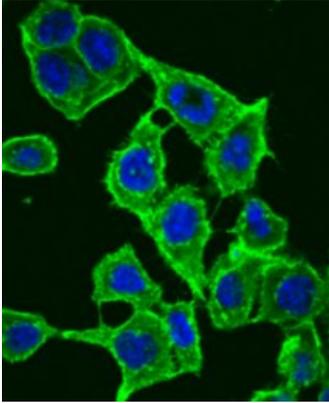
Immunohistochemical staining of paraffin embedded, PFA fixed, mouse liver using ab6302 at 1/200. Heat mediated antigen retrieval was performed using sodium citrate buffer, pH 6, and the sample was permeabilized with 0.05% Triton X 100. The sample was blocked in 5% BSA for 1 hour at room temperature and was then incubated with primary antibody for 16 hours in PBS/0.05% Triton X 100 at 4 °C. An Alexa Fluor[®] 488 donkey anti-rabbit was used as the secondary at 1/250.



IHC - Wholemout - Anti-beta Catenin antibody (ab6302)

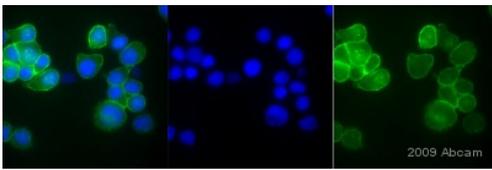
This image is courtesy of an anonymous abreview.

IHC-Wholemout image of anti-beta Catenin antibody (ab6302) staining on the Zebrafish jaw of a 5 day old larva. This larva was stained with anti-beta Catenin antibody (green) and a collagen 2 antibody (red) for 2 hours at 20°C. The image shows the cartilage elements of the jaw.



Immunocytochemistry/ Immunofluorescence - Anti-beta Catenin antibody (ab6302)

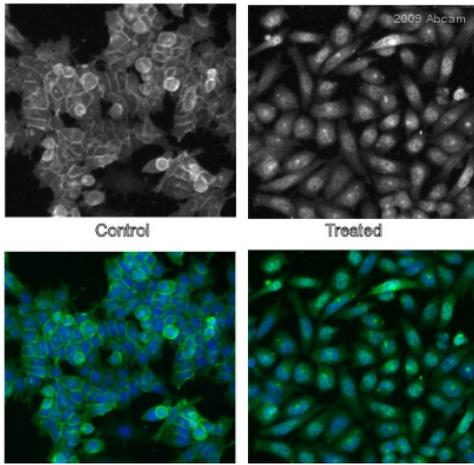
This picture was kindly supplied as part of the review submitted by Mohaiza Dashwood. Immunofluorescence of H29 cells stained with DAPI (blue) and rabbit polyclonal anti-beta-catenin ([ab6302](#)), 1/2000) with Alexa Fluor 488 (green) from Molecular Probes.



Immunocytochemistry/ Immunofluorescence - Anti-beta Catenin antibody (ab6302)

This image is courtesy of an Abreview submitted by Jennifer Schnabel

[ab6302](#) at 1/2000 dilution staining beta Catenin in human HeLa cells by immunocytochemistry/ immunofluorescence. Sections were paraformaldehyde fixed, permeabilized in 0.3% Triton X prior to blocking in 5% BSA for 2 hours at 27°C and then incubated with [ab6302](#) for 8 hour at 4°C. Alexa fluor® 488 goat polyclonal, diluted 1/1000, was used as the secondary antibody. Counterstaining with DAPI.



ab6302 at 1/500 dilution staining beta Catenin in human breast cells by immunocytochemistry/ immunofluorescence. Sections were formaldehyde fixed, permeabilized in 0.5% digitonin prior to incubating with **ab6302** for 1 hour. Alexa fluor® 488 goat polyclonal, diluted 1/500, was used as the secondary antibody. Treated samples received 10um GSK-3 Inhibitor X.

Immunocytochemistry/ Immunofluorescence - Anti-beta Catenin antibody (ab6302)

This image is courtesy of an Abreview submitted by Roderick Benson

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