

Product datasheet

Anti-beta Catenin (phospho S33) antibody ab73153

★★★★☆ 1 Abreviews 2 Images

Overview

Product name	Anti-beta Catenin (phospho S33) antibody
Description	Rabbit polyclonal to beta Catenin (phospho S33)
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-FoFr
Species reactivity	Reacts with: Rat, Human Predicted to work with: Mouse, Cow, Zebrafish
Immunogen	Synthetic peptide conjugated to KLH derived from within residues 1 - 100 of Human beta Catenin, phosphorylated at S33. Read Abcam's proprietary immunogen policy (Peptide available as ab73676 .)
Positive control	This antibody gave a positive signal in the following whole cell lysates: U2OS; HeLa; A431; SW480

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 or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS. pH 7.4
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab73153** 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
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Application	Abreviews	Notes
WB		Use a concentration of 1 mg/ml. Detects a band of approximately 95 kDa (predicted molecular weight: 85 kDa).
IHC-FoFr	★★★★☆	1/100.

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 pilomatixoma (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.

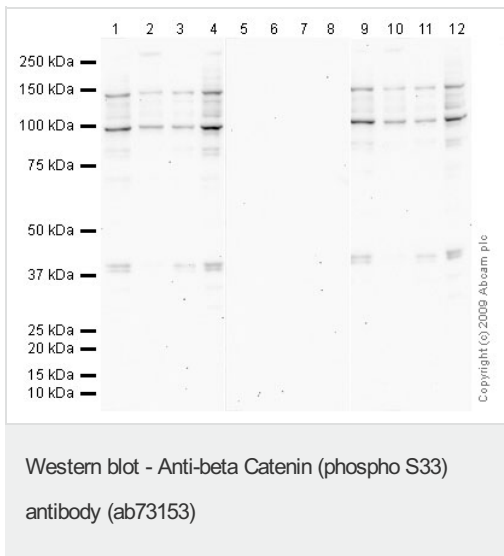
Ubiquitinated by the SCF(BTRC) E3 ligase complex when phosphorylated by GSK3B, leading to its degradation. Ubiquitinated by a E3 ubiquitin ligase complex containing UBE2D1, SIAH1, CACYBP/SIP, SKP1, APC and TBL1X, leading to its subsequent proteasomal degradation.

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 (phospho S33) antibody (ab73153) at 1 µg/ml

Lane 1 : U2OS (Human osteosarcoma cell line) Whole Cell Lysate

Lane 2 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate

Lane 3 : A431 (Human epithelial carcinoma cell line) Whole Cell Lysate

Lane 4 : SW480 whole cell lysate ([ab3957](#))

Lane 5 : U2OS (Human osteosarcoma cell line) Whole Cell Lysate with Human beta Catenin (phospho S33) peptide ([ab73676](#)) at 1 µg/ml

Lane 6 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate with Human beta Catenin (phospho S33) peptide ([ab73676](#)) at 1 µg/ml

Lane 7 : A431 (Human epithelial carcinoma cell line) Whole Cell Lysate with Human beta Catenin (phospho S33) peptide ([ab73676](#)) at 1 µg/ml

Lane 8 : SW480 whole cell lysate ([ab3957](#)) with Human beta Catenin (phospho S33) peptide ([ab73676](#)) at 1 µg/ml

Lane 9 : U2OS (Human osteosarcoma cell line) Whole Cell Lysate with Human beta Catenin peptide ([ab73677](#)) at 1 µg/ml

Lane 10 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate with Human beta Catenin peptide ([ab73677](#)) at 1 µg/ml

Lane 11 : A431 (Human epithelial carcinoma cell line) Whole Cell Lysate with Human beta Catenin peptide ([ab73677](#)) at 1 µg/ml

Lane 12 : SW480 whole cell lysate ([ab3957](#)) with Human beta Catenin peptide ([ab73677](#)) at 1 µg/ml

Lysates/proteins at 10 µg per lane.

Secondary

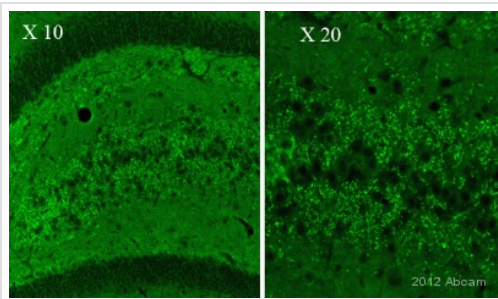
Lanes 1 & 12 : Goat polyclonal to Rabbit IgG
- H&L - Pre-Adsorbed (HRP) at 1/3000
dilution

Lanes 2-11 : Goat polyclonal to Rabbit IgG -
H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Performed under reducing conditions.

Predicted band size: 85 kDa

Exposure time: 10 minutes



Immunohistochemistry (PFA perfusion fixed frozen sections) - Anti-beta Catenin (phospho S33) antibody (ab73153)

This image is courtesy of an abreview submitted by Sophie Pezet, ESPCI, France

IHC-FoFr image of beta Catenin (phospho S33) staining on rat hippocampal sections (10x and 20x magnification) using ab73153 (1/100). The sections used came from animals perfused fixed with Paraformaldehyde 4% with 15% of a solution of saturated picric acid, in phosphate buffer 0.1M. Following postfixation in the same fixative overnight, the spinal cord were cryoprotected in sucrose 30% overnight. Spinal cords were then cut using a cryostat and the immunostainings were performed using the 'free floating' technique.

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