


Anti-beta Catenin (phospho Y489) antibody ab119801

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Overview

Product name	Anti-beta Catenin (phospho Y489) antibody
Description	Rabbit polyclonal to beta Catenin (phospho Y489)
Host species	Rabbit
Specificity	Immunogen has high homology to the conserved site in gamma-Catenin (Y480).
Tested applications	Suitable for: WB, ICC
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	A431 cells and cell lysates treated with pervanadate.
General notes	Do not aliquot. 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. 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&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	Preservative: 0.05% Sodium azide Constituents: 49% PBS, 50% Glycerol, 0.1% BSA
Purity	Immunogen affinity purified
Purification notes	ab119801 was cross-adsorbed to phospho-beta Catenin (phospho Y654) peptide before affinity purification using phospho-beta Catenin (Y489) peptide (without carrier).
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab119801 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
WB		1/1000. Detects a band of approximately 88 kDa (predicted molecular weight: 85 kDa).
ICC		1/250.

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.

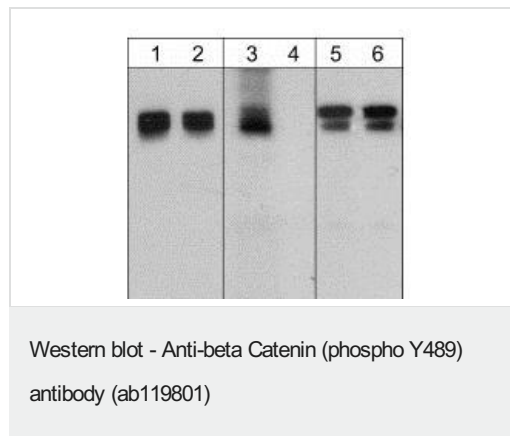
Ubiquitinated by the SCF(BTRC) E3 ligase complex when phosphorylated by GSK3B, leading to

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



Lanes 1-2 : Anti-gamma Catenin at 1/1000 dilution

Lanes 3-4 : Anti-beta Catenin (phospho Y489) antibody (ab119801) at 1/1000 dilution

Lanes 5-6 : Anti-beta Catenin at 1/1000 dilution

Lanes 1 & 3 & 5 : A431 cell lysate, stimulated with pervanadate (1 mM) for 30 min

Lane 2 : A431 cell lysate, stimulated with pervanadate (1 mM) for 30 min then treated with alkaline phosphatase

Lanes 4 & 6 : A431 cell lysate, stimulated with pervanadate (1 mM) for 30 min then treated with alkaline phosphatase

Predicted band size: 85 kDa



ab119801 at 1/250 dilution staining beta Catenin in A431 cells treated with pervanadate by Immunocytochemistry followed by detection with secondary antibody conjugated to Cy3.

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