abcam

Product datasheet

Anti-beta Catenin (phospho S37) antibody [EP742(2)Y] ab75777

Recombinant RabMAb

15 References 6 Images

Overview

Product name	Anti-beta Catenin (phospho S37) antibody [EP742(2)Y]
Description	Rabbit monoclonal [EP742(2)Y] to beta Catenin (phospho S37)
Host species	Rabbit
Specificity	*Stimulation may be required to allowdetection of the phosphorylated protein. Please see images belowfor recommended treatment conditions and positive controls.*
Tested applications	**Suitable for:** WB, Dot blot **Unsuitable for:** Flow Cyt,ICC/IF,IHC-P or IP
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	293T cell lysates, untreated or treated with calyculin A.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. Mouse: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture

	supernatant
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP742(2)Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab75777 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 100 kDa (predicted molecular weight: 85 kDa).
Dot blot		1/1000.

Application notes Is unsuitable for Flow Cyt,ICC/IF,IHC-P or IP.

Target

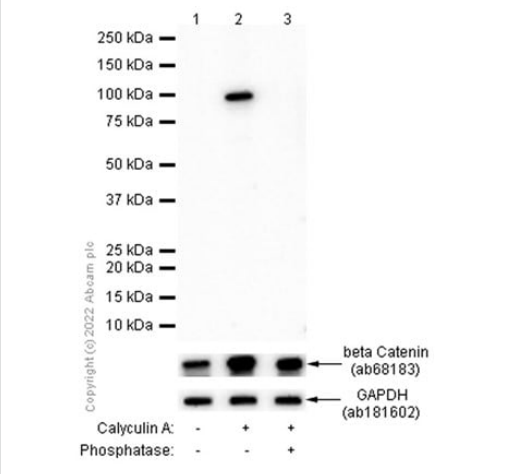
Function Key dowstream component of the canonical Wnt signaling pathway. In the absence of Wnt, forms a complex with AXIN1, AXIN2, APC, CSNK1A1 and GSK3B that promotes phosphorylation on N-terminal Ser and Thr residues and ubiquitination of CTNNB1 via BTRC and its subsequent degradation by the proteasome. 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



Western blot - Anti-beta Catenin (phospho S37) antibody [EP742(2)Y] (ab75777)

All lanes : Anti-beta Catenin (phospho S37) antibody [EP742(2)Y] (ab75777) at 1/1000 dilution

Lane 1 : Untreated C6 (Rat glial tumor glial cell) whole cell lysate
Lane 2 : C6 treated with 100ng/ml Calyculin A for 30 min whole cell lysate
Lane 3 : C6 treated with 100ng/ml Calyculin A for 30 min whole cell lysate, then membrane treated with Alkaline Phosphatase for 1 hour

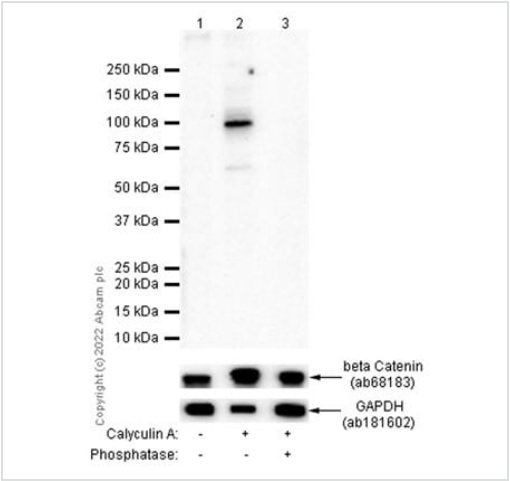
Lysates/proteins at 15 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 85 kDa
Observed band size: 100 kDa

Exposure time: 40 seconds

Blocking and diluting buffer and concentration: 5% NFDM/TBST



Western blot - Anti-beta Catenin (phospho S37) antibody [EP742(2)Y] (ab75777)

All lanes : Anti-beta Catenin (phospho S37) antibody [EP742(2)Y] (ab75777) at 1/1000 dilution

Lane 1 : Untreated NIH/3T3 (Mouse embryonic fibroblast) whole cell lysate
Lane 2 : NIH/3T3 treated with 100nM Calyculin A for 30 min whole cell lysate
Lane 3 : NIH/3T3 treated with 100nM Calyculin A for 30 min whole cell lysate, then membrane treated with Alkaline Phosphatase for 1 hour

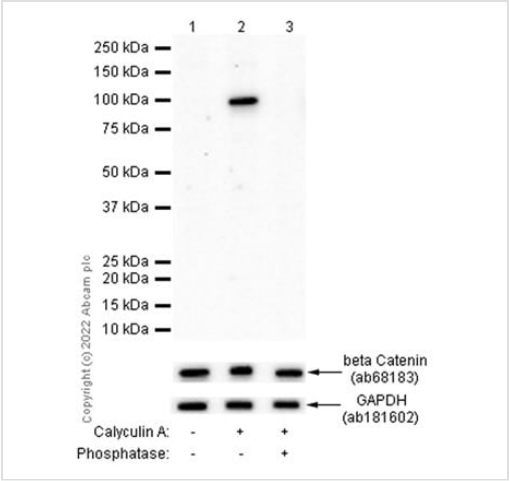
Lysates/proteins at 15 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 85 kDa
Observed band size: 100 kDa

Exposure time: 120 seconds

Blocking and diluting buffer and concentration: 5% NFDM/TBST



Western blot - Anti-beta Catenin (phospho S37) antibody [EP742(2)Y] (ab75777)

All lanes : Anti-beta Catenin (phospho S37) antibody [EP742(2)Y] (ab75777) at 1/1000 dilution

Lane 1 : Untreated HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate
Lane 2 : HeLa treated with 100nM Calyculin A for 30 min whole cell lysate
Lane 3 : HeLa treated with 100nM Calyculin A for 30 min whole cell lysate, then membrane treated with Alkaline Phosphatase for 1 hour

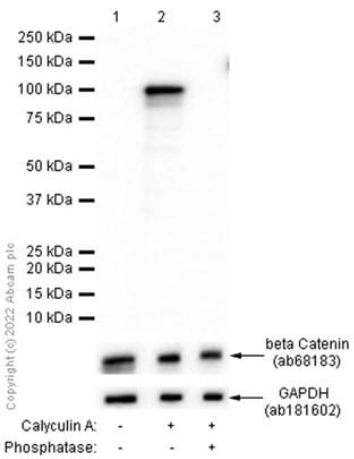
Lysates/proteins at 15 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 85 kDa
Observed band size: 100 kDa

Exposure time: 80 seconds

Blocking and diluting buffer and concentration: 5% NFDM/TBST



Western blot - Anti-beta Catenin (phospho S37) antibody [EP742(2)Y] (ab75777)

All lanes : Anti-beta Catenin (phospho S37) antibody [EP742(2)Y] (ab75777) at 1/1000 dilution

Lane 1 : Untreated HEK-293 (Human embryonic kidney epithelial cell) whole cell lysate
Lane 2 : HEK-293 treated with 50nM Calyculin A for 3 hours whole cell lysate
Lane 3 : HEK-293 treated with 50nM Calyculin A for 3 hours whole cell lysate, then membrane treated with Alkaline Phosphatase for 1 hour

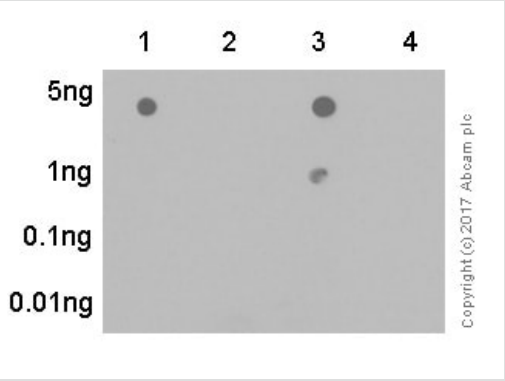
Lysates/proteins at 15 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 85 kDa
Observed band size: 100 kDa

Exposure time: 10 seconds

Blocking and diluting buffer and concentration: 5% NFDM/TBST



Dot Blot - Anti-beta Catenin (phospho S37) antibody [EP742(2)Y] (ab75777)

Dot blot analysis of Beta catenin phospho peptide with ab75777 at 1/1000 exposed for 3 minutes. Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) (1/100,000) was used as the secondary antibody. Blocking buffer 5% NFDM/TBST. Diluting buffer 5% NFDM/TBST.

Lane 1: Beta catenin (pS33+pS37) phospho peptide
Lane 2: Beta catenin (pS33) phospho peptide
Lane 3: Beta catenin (pS37) phospho peptide
Lane 4: Beta catenin non-phospho peptide

Anti-beta Catenin (phospho S37) antibody [EP742(2)Y] (ab75777)

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