

Product datasheet

Recombinant Human beta Catenin protein (Tagged)
ab63175

3 References 3 Images

Description

Product name	Recombinant Human beta Catenin protein (Tagged)
Purity	> 70 % Affinity purified. Purified by affinity chromatography
Expression system	Baculovirus infected Sf9 cells
Accession	NM_001904
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	<p>MATQADLMEL DMAMEPDRKA AVSHWQQQSY LDSGIHSGAT TTAPSLSGKG NPEEEDVDTS QVLYEWEQGF SQSFTQEQA DIDGQYAMTR AQRVRAAMFP ETLDEGMQIP STQFDDAAHPT NVQRLAEPSQ MLKHAVVNLI NYQDDAELAT RAIPELTKLL NDEDQVVVNK AAVMVHQLSK KEASRHAIMR SPQMVSAMR TMQNTNDVET ARCTAGTLHN LSHHREGLLA IFKSGGIPAL VKMLGSPVDS VLFYAITTLH NLLHQEGAK MAVRLAGGLQ KMVALLNKTN VKFLAITTDC LQILAYGNQE SKLILASGG PQALVNIMRT YTYEKLLWTT SRVLKVLVSVS SSNKPAVEA GGMQALGLHL TDPSQRLVQN CLWTLRNLSD AATKQEGMEG LLGTLVQLLG SDDINVTCA AGILSNLTCN NYKNKMMVCQ VGGIEALVRT VLRAGDREDI TEPAICALRH LTSRHQEAEM AQNAVRLHYG LPVVVKLLHP PSHWPLIKAT VGLIRNLALC PANHAPLREQ GAIPRLVQLL VRAHQDTQRR TSMGGTQQQF VEGVRMEEV EGCTGALHIL ARDVHNRMI RGLNTIPLFV QLLYSPIENI QRVAAGVLCE LAQDKEAAEA IEAEGATAPL TELLHSRNEG VATYAAAVLF RMSEDKPQDY KKRLSVELTS SLFRTEPMAW NETADLGLDI GAQGEPLGYR QDDPSYRSFH SGGYGQDALG MDPMMEHEMG GHHPGADYPV DGLPDLGHAQ DLMDGLPPGD SNQLAWFDTD L</p>

Predicted molecular weight	115 kDa
Amino acids	1 to 781
Tags	GST tag N-Terminus

Specifications

Our [Abpromise guarantee](#) covers the use of **ab63175** in the following tested applications.

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

Applications	Western blot
	SDS-PAGE
	ELISA
Form	Liquid

Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.00174% PMSF, 0.00385% DTT, 0.79% Tris HCl, 25% Glycerol (glycerin, glycerine), 0.87% Sodium chloride
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General Info

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.

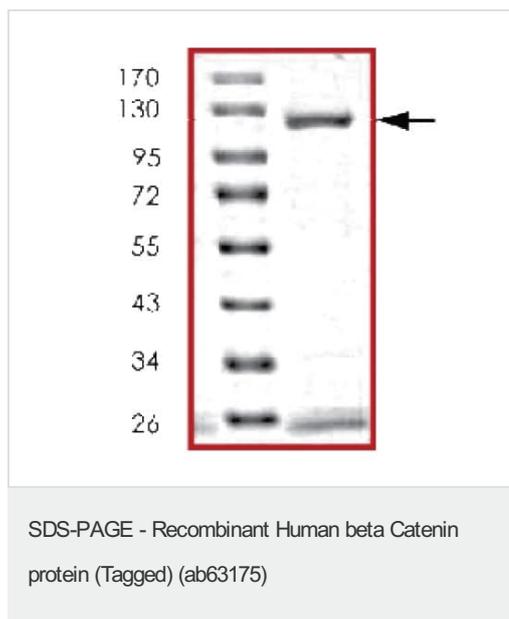
Post-translational modifications

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.

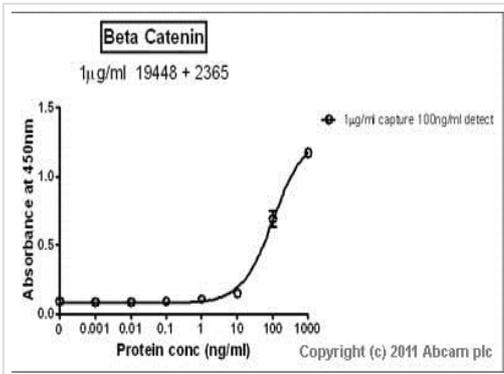
Cellular localization

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

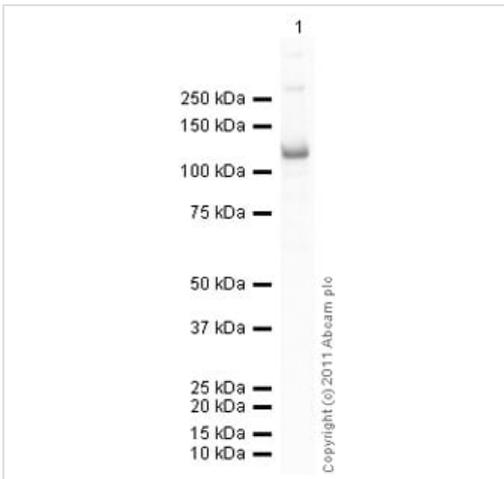


SDS-PAGE analysis of Recombinant Human beta Catenin protein (Tagged) (ab63175).
MW ~115 kDa



Sandwich ELISA - Recombinant Human beta Catenin protein (Tagged) (ab63175)

Standard Curve for ab63175; dilution range 1 pg/ml to 1 µg/ml using Capture Antibody [Mouse monoclonal \[BDI080\] to beta Catenin \(ab19448\)](#) at 1 µg/ml and Detector Antibody [Rabbit polyclonal to beta Catenin \(ab16051\)](#) at 0.1 µg/ml.



Western blot - Recombinant Human beta Catenin protein (Tagged) (ab63175)

Anti-beta Catenin antibody ([ab16051](#)) at 0.25 µg/ml + Recombinant Human beta Catenin protein (Tagged) (ab63175) at 0.01 µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) preadsorbed ([ab97080](#)) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Exposure time: 10 seconds

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