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Product datasheet

Anti-beta Catenin (phospho S675) antibody ab58615

1 References 1 Image

Overview

Product name	Anti-beta Catenin (phospho S675) antibody
Description	Rabbit polyclonal to beta Catenin (phospho S675)
Host species	Rabbit
Specificity	ab58615 reacts specifically with phosphorlyated ß-Catenin at the phosphorylation site of Ser675, not with other non-related phosphospecific peptides or non-phosphorylated ß-Catenin peptides.
Tested applications	**Suitable for:** ELISA, IHC-Fr, IP, WB
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat, Chicken
Immunogen	A synthetic peptide of C-terminal portion of human ß-Catenin at the phosphorylation site of Serine 675.
Positive control	Mouse embryonic cell lysate HEK293 whole cell lysate CCL-226 whole cell lysate
General notes	Store at 2-8 °C for up to 1 year.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C.
Storage buffer	Preservative: 0.05% Sodium Azide Constituents: PBS, pH 7.4
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab58615** 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
ELISA		Use a concentration of 0.1 - 1 µg/ml.
IHC-Fr		Use a concentration of 1 - 2 µg/ml.
IP		Use 3µg for 10^5 cells.
WB		Use a concentration of 0.5 - 2 µg/ml. Predicted molecular weight: 88 kDa.

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 S675) antibody (ab58615)

All lanes : Anti-beta Catenin (phospho S675) antibody (ab58615) at 1/200 dilution

Lane 1 : (Left): Stimulated CCL-226 whole cell lysate, minus immunising peptide
Lane 2 : (Right): Stimulated CCL-226 whole cell lysate, plus immunising peptide

Lysates/proteins at 15 µg per lane.

Predicted band size: 88 kDa
Observed band size: 88 kDa

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