

CTNNB1 Antibody (C-term)
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8631b

Specification

CTNNB1 Antibody (C-term) - Product Information

Application	IF, WB,E
Primary Accession	P35222
Other Accession	Q0VCX4 , B6V8E6 , Q02248 , Q9WU82 , F1QGH7
Reactivity	Human, Mouse, Rat
Predicted	Bovine, Zebrafish
Host	Mouse
Clonality	monoclonal
Isotype	IgG1
Calculated MW	85497

CTNNB1 Antibody (C-term) - Additional Information

Gene ID 1499

Other Names

Catenin beta-1, Beta-catenin, CTNNB1, CTNNB

Target/Specificity

This CTNNB1 antibody is generated from a mouse immunized with a KLH conjugated synthetic peptide between 687-721 amino acids from the C-terminal region of human CTNNB1.

Dilution

IF~~1:25

WB~~1:4000

Format

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

CTNNB1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

CTNNB1 Antibody (C-term) - Protein Information

Name CTNNB1 ([HGNC:2514](#))

Synonyms CTNNB

Function Key downstream component of the canonical Wnt signaling pathway (PubMed:[17524503](#), PubMed:[18077326](#), PubMed:[18086858](#), PubMed:[18957423](#), PubMed:[21262353](#), PubMed:[22155184](#), PubMed:[22647378](#), PubMed:[22699938](#)). 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 (PubMed:[17524503](#), PubMed:[18077326](#), PubMed:[18086858](#), PubMed:[18957423](#), PubMed:[21262353](#), PubMed:[22155184](#), PubMed:[22647378](#), PubMed:[22699938](#)). 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 (PubMed:[17524503](#), PubMed:[18077326](#), PubMed:[18086858](#), PubMed:[18957423](#), PubMed:[21262353](#), PubMed:[22155184](#), PubMed:[22647378](#), PubMed:[22699938](#)). Involved in the regulation of cell adhesion, as component of an E-cadherin:catenin adhesion complex (By similarity). Acts as a negative regulator of centrosome cohesion (PubMed:[18086858](#)). Involved in the CDK2/PTPN6/CTNNB1/CEACAM1 pathway of insulin internalization (PubMed:[21262353](#)). Blocks anoikis of malignant kidney and intestinal epithelial cells and promotes their anchorage-independent growth by down-regulating DAPK2 (PubMed:[18957423](#)). Disrupts PML function and PML- NB formation by inhibiting RANBP2-mediated sumoylation of PML (PubMed:[22155184](#)). Promotes neurogenesis by maintaining sympathetic neuroblasts within the cell cycle (By similarity). Involved in chondrocyte differentiation via interaction with SOX9: SOX9-binding competes with the binding sites of TCF/LEF within CTNNB1, thereby inhibiting the Wnt signaling (By similarity). Acts as a positive regulator of odontoblast differentiation during mesenchymal tooth germ formation, via promoting the transcription of differentiation factors such as LEF1, BMP2 and BMP4 (By similarity). Activity is repressed in a MSX1-mediated manner at the bell stage of mesenchymal tooth germ formation which prevents premature differentiation of odontoblasts (By similarity).

Cellular Location

Cytoplasm. Nucleus. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:B6V8E6}. Cell junction, adherens junction Cell junction {ECO:0000250|UniProtKB:B6V8E6}. Cell membrane. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle pole. Synapse {ECO:0000250|UniProtKB:Q02248} Cytoplasm, cytoskeleton, cilium basal body {ECO:0000250|UniProtKB:Q02248}. Note=Colocalized with RAPGEF2 and TJP1 at cell-cell contacts (By similarity). Cytoplasmic when it is un-stable (highly phosphorylated) 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. The majority of CTNNB1 is localized to the cell membrane. In interphase, colocalizes with CROCC between CEP250 puncta at the proximal end of centrioles, and this localization is dependent on CROCC and CEP250. In mitosis, when NEK2 activity increases, it localizes to centrosomes at spindle poles independent of CROCC. Colocalizes with CDK5 in the cell-cell contacts and plasma membrane of undifferentiated and differentiated neuroblastoma cells Interaction with FAM53B promotes translocation to the nucleus (PubMed:25183871). Translocates to the nucleus in the presence of SNAIL1 (By similarity). Ca(2+)-mediated localization to the cell membrane in dental epithelial cells is inhibited via WNT3A (By similarity). Localizes to cell-cell contacts as keratinocyte differentiation progresses (By similarity) {ECO:0000250|UniProtKB:B6V8E6, ECO:0000250|UniProtKB:Q02248, ECO:0000269|PubMed:25183871}

Tissue Location

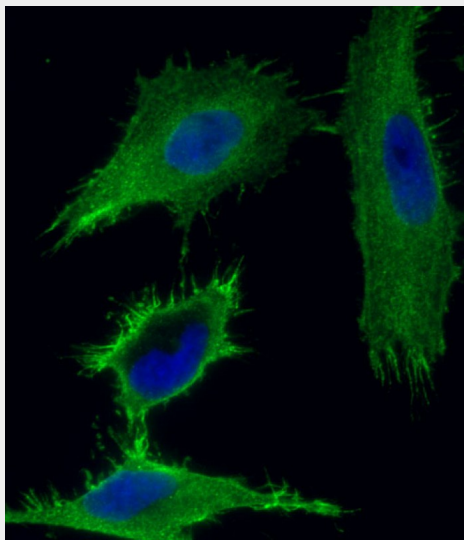
Expressed in several hair follicle cell types: basal and peripheral matrix cells, and cells of the outer and inner root sheaths. Expressed in colon. Present in cortical neurons (at protein level). Expressed in breast cancer tissues (at protein level) (PubMed:29367600).

CTNNB1 Antibody (C-term) - Protocols

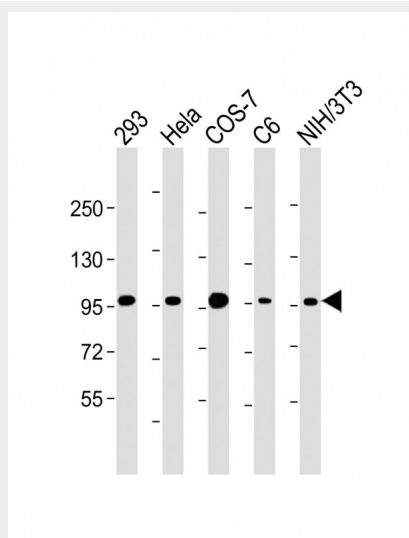
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CTNNB1 Antibody (C-term) - Images



Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human cervical epithelial adenocarcinoma cell line) cells labeling CTNNB1 with AM8631b at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-mouse IgG (NH174309) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing membrane staining on HeLa cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin (OI17558410) at 1/100 dilution (red). The nuclear counter stain is DAPI (blue).



All lanes : Anti-CTNNB1 Antibody (C-term) at 1:4000 dilution Lane 1: 293 whole cell lysate Lane 2: HeLa whole cell lysate Lane 3: COS-7 whole cell lysate Lane 4: C6 whole cell lysate Lane 5: NIH/3T3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG,

(H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 98 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

CTNNB1 Antibody (C-term) - Background

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. Acts as a negative regulator of centrosome cohesion. Involved in the CDK2/PTPN6/CTNNB1/CEACAM1 pathway of insulin internalization. Blocks anoikis of malignant kidney and intestinal epithelial cells and promotes their anchorage-independent growth by down-regulating DAPK2. Disrupts PML function and PML-NB formation by inhibiting RANBP2-mediated sumoylation of PML (PubMed:17524503, PubMed:18077326, PubMed:18086858, PubMed:18957423, PubMed:21262353, PubMed:22647378, PubMed:22699938, PubMed:22155184). Promotes neurogenesis by maintaining sympathetic neuroblasts within the cell cycle (By similarity).

CTNNB1 Antibody (C-term) - References

Huelsken J.,et al.J. Cell Biol. 127:2061-2069(1994).
Zhang C.,et al.Submitted (FEB-1999) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Muzny D.M.,et al.Nature 440:1194-1198(2006).
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