abcam

ab265591

Anti-beta Catenin antibody [BLR086G]

Lab Essentials | Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.8 - 8.6 Preservative: 0.09% Sodium azide Constituents: 98% Borate buffered saline, 0.1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human CTNNB1 aa 700 to C-terminus. The exact immunogen used to generate this antibody is proprietary information. Database link P35222
Clone number	BLR086G
Purification technique	Affinity purification
Purification notes	Purified from TCS.

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with ICC staining protocol.

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	20 µl/mg lysate.

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1 µL for 10^6 Cells
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information CTNNB1

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).

Also acts as a coactivator for other transcription factors, such as NR5A2 (PubMed:22187462). Promotes epithelial to mesenchymal transition/mesenchymal to epithelial transition (EMT/MET) via driving transcription of CTNNB1/TCF-target genes (PubMed:29910125). 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).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

REACH authorisation
Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.
It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Beta Catenin also known by names such as CTNNB1 or beta-chip is an important protein involved in cell signaling and adhesion. This protein has a molecular weight of around 88 kDa. Beta Catenin is expressed in many cell types and tissues indicating its widespread role in various biological processes. It functions mechanically by mediating the linkage between cadherins and the actin cytoskeleton facilitating cell-cell adhesion. Beta Catenin is also a central part of transcription regulation processes in the nucleus.
Biological function summary	This protein plays roles in both cell adhesion and the regulation of gene expression. Beta Catenin is a critical component of the Wnt signaling pathway where it can form complexes with other proteins to influence gene transcription. In the absence of Wnt signaling beta Catenin levels are low due to its degradation. However when the pathway is active it accumulates in the cytoplasm and eventually translocates to the nucleus where it interacts with TCF/LEF transcription factors to regulate the expression of target genes.
Pathways	Beta Catenin plays a central role in the Wnt signaling pathway and influences cell fate decisions and cellular proliferation. It acts in concert with proteins such as Dishevelled (DVL) and Axin to coordinate these important biological processes. In the absence of Wnt signaling proteins such as APC and GSK-3β are responsible for beta Catenin degradation keeping its cellular levels in check. Beta Catenin's interaction with transcription factors in the nucleus makes it pivotal in the regulation of cell and tissue homeostasis.
Associated diseases and disorders	Beta Catenin has associations with colorectal cancer and hepatocellular carcinoma. Its dysregulation can lead to unchecked cell proliferation and tumorigenesis. Often mutations in the beta Catenin gene (CTNNB1) or components of the Wnt pathway like APC are implicated in the development of these cancers. Its interplay with E-cadherin is important for maintaining tissue architecture and disruptions can lead to invasive cancer phenotypes. Understanding beta Catenin's role provides insights into therapeutic strategies for these cancers.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

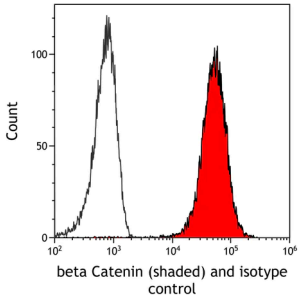
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

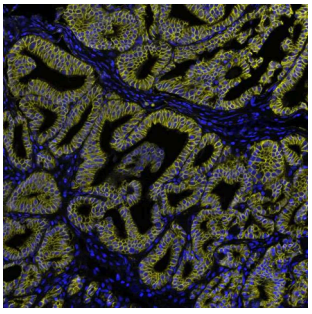
Full details and terms and conditions can be found here:
Terms & Conditions.

9 product images



Flow Cytometry - Anti-beta Catenin antibody [BLR086G] (ab265591)

Flow cytometry overlay histogram of 4% formaldehyde fixed FaDu cells permeabilized with 90% methanol labeling human beta Catenin with ab265591 at 1 µl per 1 x 10^6 cells (shaded) compared with a Isotype control (unshaded). Secondary antibody details: Goat Anti-Rabbit IgG H&L (DyLight® 650) (ab96886).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta Catenin antibody [BLR086G] (ab265591)

Beta Catenin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-beta Catenin antibody

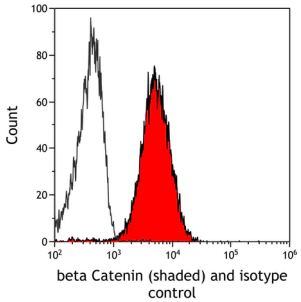
Immunohistochemical analysis of formalin-fixed, paraffin-embedded human prostate carcinoma, labeling beta Catenin with ab265591. HRP-conjugated goat anti-rabbit IgG used as the secondary antibody. DAPI counterstain.



Immunocytochemistry - Anti-beta Catenin antibody [BLR086G] (ab265591)

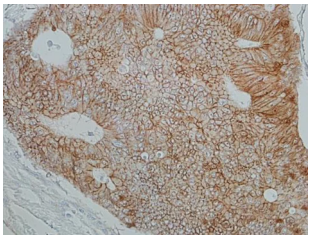
Beta Catenin Immunocytochemistry staining using rabbit Anti-beta Catenin antibody

Immunocytochemical analysis of formalin-fixed, paraffin-embedded OVCAR-3 (Human ovarian carcinoma cell line) cells labeling beta Catenin with ab265591 at 1/100 dilution. Detection: DAB.



Flow Cytometry - Anti-beta Catenin antibody [BLR086G] (ab265591)

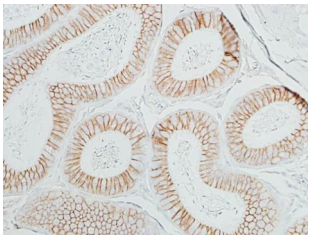
Flow cytometry overlay histogram of 4% formaldehyde fixed FaDu cells permeabilized with 90% methanol labeling mouse beta Catenin with ab265591 at 1 µl per 1 x 10^6 cells (shaded) compared with a Isotype control (unshaded). Secondary antibody details: Goat Anti-Rabbit IgG H&L (DyLight® 650) (ab96886).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta Catenin antibody [BLR086G] (ab265591)

Beta Catenin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-beta Catenin antibody

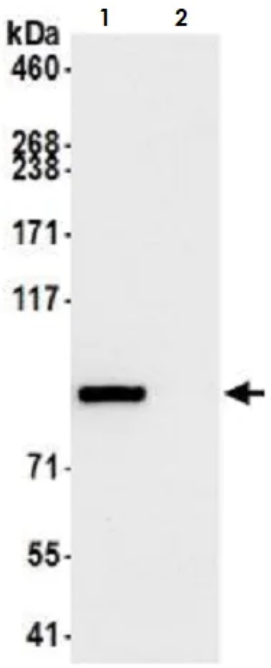
Immunohistochemical analysis of formalin-fixed, paraffin-embedded human colon carcinoma tissue labeling beta Catenin with ab265591 at 1/100 dilution. Detection: DAB.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta Catenin antibody [BLR086G] (ab265591)

Beta Catenin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-beta Catenin antibody

Immunohistochemical analysis of formalin-fixed, paraffin-embedded human plasmacytoma tissue labeling beta Catenin with ab265591 at 1/100 dilution. Detection: DAB.



Immunoprecipitation - Anti-beta Catenin antibody [BLR086G] (ab265591)

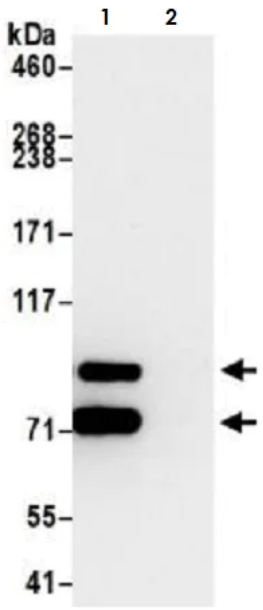
beta Catenin was immunoprecipitated from 1mg of HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate with ab265591 at 20 µl per reaction. Western blot was performed from the immunoprecipitate using ab265591 at 1/1000 dilution.

Lane 1: ab265591 IP in HeLa whole cell lysate.
Lane 2: Control IgG.
Exposure time: 3 secs.

Cells prepared using NETN lysis buffer.

All lanes:
Immunoprecipitation - Anti-beta Catenin antibody [BLR086G] (ab265591)

Predicted band size: 85 kDa



Immunoprecipitation - Anti-beta Catenin antibody [BLR086G] (ab265591)

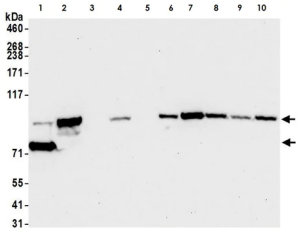
beta Catenin was immunoprecipitated from 1mg of HepG2 (Human liver hepatocellular carcinoma cell line) whole cell lysate with ab265591 at 20 µl per reaction. Western blot was performed from the immunoprecipitate using ab265591 at 1/1000 dilution.

Lane 1: ab265591 IP in HeLa whole cell lysate.
Lane 2: Control IgG.
Exposure time: 3 secs.

Cells prepared using NETN lysis buffer.

All lanes:
Immunoprecipitation - Anti-beta Catenin antibody [BLR086G] (ab265591)

Predicted band size: 85 kDa



Western blot - Anti-beta Catenin antibody [BLR086G] (ab265591)

Cells prepared using NETN lysis buffer.
All lanes:
Western blot - Anti-beta Catenin antibody [BLR086G] (ab265591) at 1/1000 dilution

Lane 1:
HepG2 whole cell lysate at 50 µg

Lane 2:
LNCaP whole cell lysate at 50 µg

Lane 3:
K562 whole cell lysate at 50 µg

Lane 4:
GaMG whole cell lysate at 50 µg

Lane 5:
Jurkat whole cell lysate at 50 µg

Lane 6:
A549 whole cell lysate at 50 µg

Lane 7:
MCF7 whole cell lysate at 50 µg

Lane 8:
HeLa whole cell lysate at 50 µg

Lane 9:
TCMK whole cell lysate at 50 µg

Lane 10:
NIH/3T3 whole cell lysate at 50 µg

Secondary

All lanes:
HRP-conjugated goat anti-rabbit IgG

Predicted band size: 85 kDa

Exposure time: 10s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.