

Datasheet for 600-401-C68**beta Catenin Antibody****Overview**

Description:	Anti-Beta Catenin (RABBIT) Antibody - 600-401-C68
Item No.:	600-401-C68
Size:	100 µg
Applications:	ELISA, IHC, WB, IF
Reactivity:	Human, Zebrafish
Host Species:	Rabbit

Product Details**Background:**

Beta-catenin 1 (or β -catenin 1) is a protein that is encoded by the CTNNB1 gene. β -catenin 1 is a subunit of the cadherin protein complex and has been implicated as an integral component in the Wnt signaling pathway. This pathway plays a key role in the regulation of cellular processes involved in development, differentiation, and adult tissue homeostasis. In the presence of Wnt ligand, β -catenin 1 is not ubiquitinated and accumulates in the nucleus, where it associates with T-cell factor (TCF) family members to regulate target gene expression in many developmental and adult tissues. Recruitment of β -catenin 1 to Wnt response element (WRE) chromatin converts TCFs from transcriptional repressors to activators. β -catenin 1 is also involved in the regulation of cell adhesion. It acts as a negative regulator of centrosome cohesion. Aberrant Wnt/ β -catenin signaling is widely implicated in cancer, bone disorders, kidney and intestinal cell disorders and other disease states.

β -catenin 1 is located in the cytoplasm when it is unstabilized or bound to CDH1. Interaction with GLIS2 and MUC1 promotes nuclear translocation. Interaction with EMD inhibits nuclear localization. The majority of β -catenin 1 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. It further co-localizes with CDK5 in the cell-cell contacts and plasma membrane of undifferentiated and differentiated neuroblastoma cells.

Synonyms:	rabbit anti-beta Catenin Antibody, rabbit anti-Catenin beta antibody, catenin beta-1, β -catenin-1, β -catenin, CTNNB1, CTNNB, beta-catenin antibody
Host Species:	Rabbit
Clonality:	Polyclonal

Format: IgG

Target Details

Gene Name:	ctnnb1
Reactivity:	Human, Zebrafish
Immunogen Type:	Conjugated Peptide
Immunogen:	beta catenin antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to catenin beta-1 C-terminus.
Purity/Specificity:	beta catenin antibody is directed against catenin beta-1 protein. The product was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest cross-reactivity with catenin beta-1 protein from human, mouse, rat, bovine, Xenopus laevis, and Danio rerio at 100% based on homology with the immunizing sequence. Reactivity against homologues from other sources is not known.
Relevant Links:	• UniProtKB - P35222 human • UniProtKB - Q9WU82 • UniProtKB - Q02248 • UniProtKB - Q0VCX4 • UniProtKB - P26233 • UniProtKB - Q90424 • UniProtKB - Q7ZU14 • UniProtKB - F1QGH7 • NCBI - NP_001091679.1 • GeneID - 1499

Application Details

Tested Applications:	ELISA, IHC, WB
Suggested Applications:	IF (Based on references)
Application Note:	beta catenin antibody has been tested for use in ELISA, western blotting, immunohistochemistry, and ISH. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 85.5 kDa in size corresponding to catenin beta-1 protein by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.

ELISA:	1:75,000 - 1:125,000
IHC:	5 - 10 ug/mL
WB:	1:500

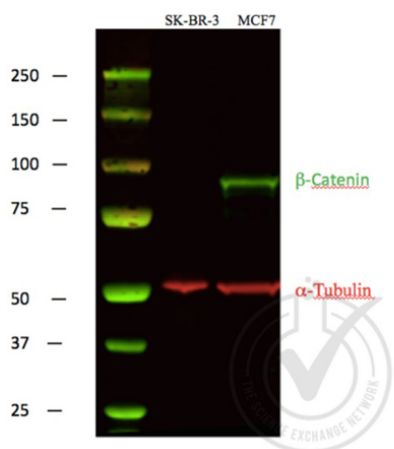
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.1 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot

Western Blot of Anti-Beta Catenin (RABBIT) Antibody.

Lane 1: protein molecular weight markers.

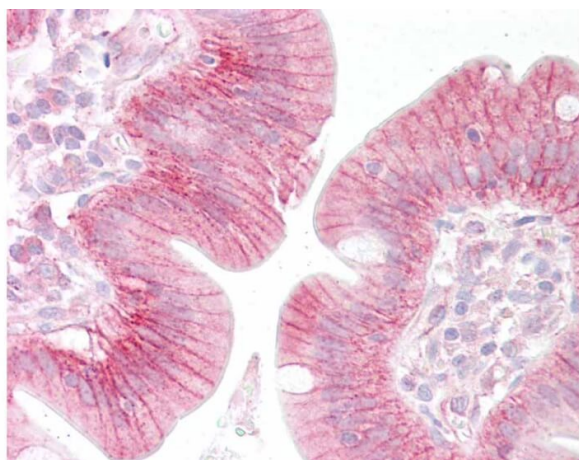
Lane 2: SK-BR-3 negative control lysate.

Lane 3: MCF-7 positive control lysate.

Primary Antibody: Anti-Beta Catenin at 1:1,000 for 2hr RT.

Secondary Antibody: IRDye® 800CW Goat anti-Mouse Secondary Antibody (Red) and IRDye 680LT Goat Anti-Rabbit Secondary Antibody (Green) at 1:10,000 at room temperature for 45 minutes.

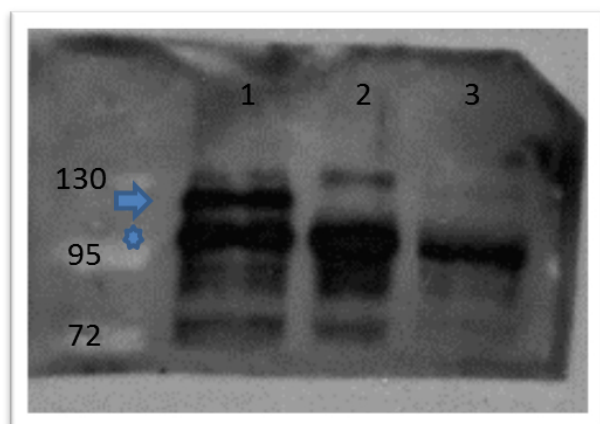
Beta Catenin (Green) and loading control alpha-tubulin (Red). A strong specific band was observed in the positive control at the expected size (~85.5 kDa) that is not observed in the negative control. Independently Validated by antibodies-online GmbH (p/n ABIN1043907/ABIN1043906) courtesy of ADS Biosystems Inc.



Immunohistochemistry

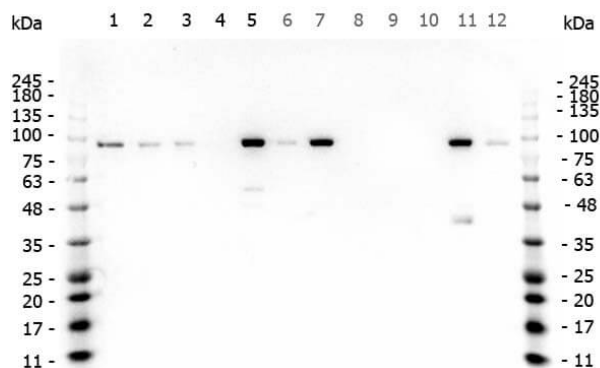
Immunohistochemistry of Rabbit anti-beta Catenin antibody.

Tissue: human small intestine epithelium. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: beta Catenin antibody at 5-10 µg/mL for 1 h at RT. Secondary antibody: Peroxidase goat anti-rabbit at 1:10,000 for 45 min at RT. Localization: Strong membranous staining in a variety of epithelial tissues. Staining: antibody as precipitated red signal with a hematoxylin purple nuclear counterstain.



Western Blot

Western Blot of Rabbit anti-catenin β -1 antibody. Lane 1: zebrafish embryos injected with myc tagged catenin β 1 mRNA. Lane 2: zebrafish embryos injected with myc tagged catenin β 2 mRNA. Lane 3: zebrafish embryos un-injected. Primary antibody: catenin β -1 antibody at 1:500 overnight at 4°C. Secondary antibody: goat anti-rabbit HRP at 1:10,000 for 1 hour at RT. Predicted/Observed size: 85.5kDa/~125kDa (arrow) endogenous catenin β -1. Other band(s): ~110kDa (star) co-migrating catenin β -1 and β -2.



Western Blot

Western Blot of Rabbit anti-Beta Catenin antibody. Marker: Opal Pre-stained ladder (p/n MB-210-0500). Lane 1: HEK293 lysate (p/n W09-000-365). Lane 2: HeLa Lysate (p/n W09-000-363). Lane 3: MCF-7 Lysate (p/n W09-000-360). Lane 4: Jurkat Lysate (p/n W09-000-370). Lane 5: A431 Lysate (p/n W09-000-361). Lane 6: A549 Lysate (p/n W09-001-372). Lane 7: LNCap Lysate (p/n W09-001-GJ9). Lane 8: MOLT-4 Lysate (p/n W09-001-GK2). Lane 9: Ramos Lysate (p/n W09-000-GK4). Lane 10: Raji Lysate (p/n W09-001-368). Lane 11: A-172 Lysate (p/n W09-001-GL5). Lane 12: NIH/3T3 Lysate (p/n W10-000-358). Load: 10 µg per lane. Primary antibody: Beta catenin antibody at 1:1,000 for overnight at 4C. Secondary antibody: Peroxidase rabbit secondary antibody (p/n 611-103-122) at 1:30,000 for 60 min at RT. Blocking Buffer: 1% Casein-TTBS for 30 min at RT. Predicted/Observed size: 85 kDa for Beta Catenin.

References

- Rogan MR et al. Ehrlichia chaffeensis TRP120 is a Wnt ligand mimetic that interacts with Wnt receptors and contains a novel repetitive short linear motif that activates Wnt signaling. *mSphere*. (2021)

Disclaimer

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