Anti-Beta-Catenin Antibody [A6-F8-R]

HA601179

Product Type:	Recombinant Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, FC
Molecular Wt:	Predicted band size: 85.5 kDa
Clone number:	A6-F8-R

Description: Catenin beta-1, also known as beta-catenin (β-catenin), is a protein that in humans is encoded by the CTNNB1 gene. Beta-catenin is a dual function protein, involved in regulation and coordination of cell–cell adhesion and gene transcription. In humans, the CTNNB1 protein is encoded by the CTNNB1 gene. In Drosophila, the homologous protein is called armadillo. β-catenin is a subunit of the cadherin protein complex and acts as an intracellular signal transducer in the Wnt signaling pathway. It is a member of the catenin protein family and homologous to γ-catenin, also known as plakoglobin. Beta-catenin is widely expressed in many tissues. In cardiac muscle, beta-catenin localizes to adherens junctions in intercalated disc structures, which are critical for electrical and mechanical coupling between adjacent cardiomyocytes. Mutations and overexpression of β-catenin are associated with many cancers, including hepatocellular carcinoma, colorectal carcinoma, lung cancer, malignant breast tumors, ovarian and endometrial cancer. Alterations in the localization and expression levels of beta-catenin have been associated with various forms of heart disease, including dilated cardiomyopathy. β-catenin is regulated and destroyed by the beta-catenin destruction complex, and in particular by the adenomatous polyposis coli (APC) protein, encoded by the tumour-suppressing APC gene. Therefore, genetic mutation of the APC gene is also strongly linked to cancers, and in particular colorectal cancer resulting from familial adenomatous polyposis (FAP).

Immunogen:	Synthetic peptide (KLH-coupled) within human Beta-catenin aa 320-400.
Positive control:	293T cell lysate, A431 cell lysate, NCCIT cell lysate, SW480 cell lysate, HT-29 cell lysate, HCT 116 cell lysate, MCF7.
Subcellular location:	Cytoplasm, Nucleus
Database links:	SwissProt: P35222 Human | Q02248 Mouse | Q9WU82 Rat
Recommended Dilutions:	
WB	1:1,000
IF-Cell	1:100
FC	1:1,000
Storage Buffer:	PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.
Purity:	Protein A affinity purified.

Images

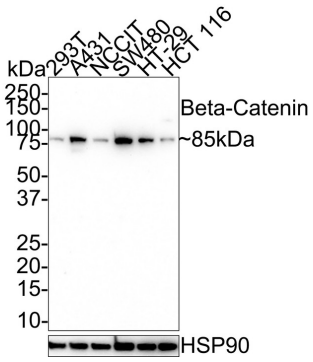

Fig1: Western blot analysis of Beta-Catenin on different lysates with Mouse anti-Beta-Catenin antibody (HA601179) at 1/1,000 dilution.

Lane 1: 293T cell lysate
Lane 2: A431 cell lysate
Lane 3: NCCIT cell lysate
Lane 4: SW480 cell lysate
Lane 5: HT-29 cell lysate
Lane 6: HCT 116 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 85 kDa
Observed band size: 85 kDa

Exposure time: 5 minutes;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601179) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

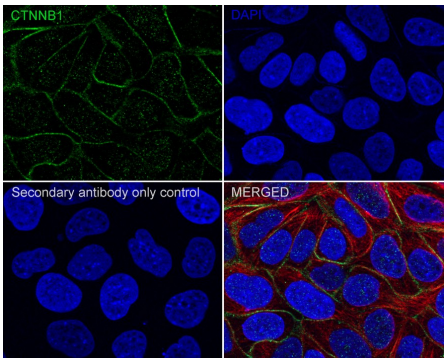

Fig2: Immunocytochemistry analysis of MCF7 cells labeling Beta-Catenin with Mouse anti-Beta-Catenin antibody (HA601179) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Mouse anti-Beta-Catenin antibody (HA601179) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

beta Tubulin (ET1602-4, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Rabbit IgG H&L (iFluor™ 594, HA1122) were used as the secondary antibody at 1/1,000 dilution.

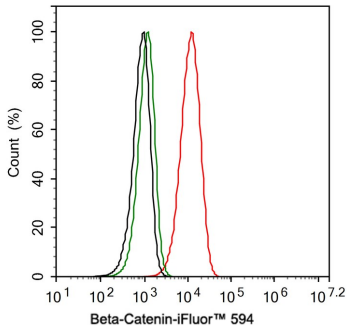

Fig3: Flow cytometric analysis of MCF7 cells labeling Beta-Catenin.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA601179, 1μg/mL) (red) compared with Mouse IgG1 Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 594 conjugate-Goat anti-Mouse IgG Secondary antibody (HA1126) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Background References

1. Kim J.-S et al. Oncogenic beta-catenin is required for bone morphogenetic protein 4 expression in human cancer cells. Cancer Res 62:2744-2748 (2002).
2. Moreno-Bueno G et al. Beta-catenin expression in pilomatrixomas. Relationship with beta-catenin gene mutations and comparison with beta-catenin expression in normal hair follicles. Br J Dermatol 145:576-581 (2001).
3. Shibata T et al. EBP50, a beta-catenin-associating protein, enhances Wnt signaling and is over-expressed in hepatocellular carcinoma. Hepatology 38:178-186 (2003).