Beta Catenin Recombinant Antibody - Rat IgG1 (Chimeric)

HA601570

Product Type:	Recombinant Chimeric Antibody, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-Fr, IHC-P, IF-Cell, mIHC
Molecular Wt:	Predicted band size: 85 kDa
Clone number:	SA30-04

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. 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 within human Beta-Catenin aa 30-70.

Positive control: HeLa cell lysate, NIH/3T3 cell lysate, C6 cell lysate, Mouse brain tissue lysate, Rat brain tissue lysate, human colon cancer tissue, human colon tissue, mouse colon tissue, rat colon tissue, C6.

Subcellular location: Cytoplasm, Nucleus, Cell membrane, Cell junction

Database links: SwissProt: P35222 Human | Q02248 Mouse | Q9WU82 Rat

Recommended Dilutions:

WB	1:2,000-1:5,000
IHC-Fr	1:200
IHC-P	1:200-1:1,000
IF-Cell	1:100
mIHC	1:1,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

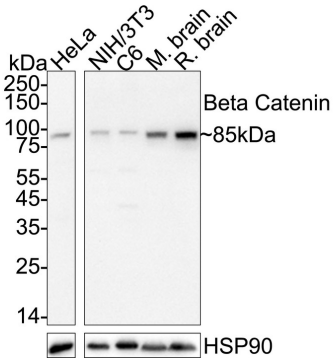

Fig1: Western blot analysis of Beta Catenin on different lysates with Rat anti-Beta Catenin antibody (HA601570) at 1/5,000 dilution.

Lane 1: HeLa cell lysate (20 µg/Lane)
Lane 2: NIH/3T3 cell lysate (20 µg/Lane)
Lane 3: C6 cell lysate (20 µg/Lane)
Lane 4: Mouse brain tissue lysate (40 µg/Lane)
Lane 5: Rat brain tissue lysate (40 µg/Lane)

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

Exposure time: 3 minutes; ECL: K1801;

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 (HA601570) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4℃ overnight. Goat Anti-Rat IgG H&L - HRP Secondary Antibody (HA1023) at 1/50,000 dilution was used for 1 hour at room temperature.

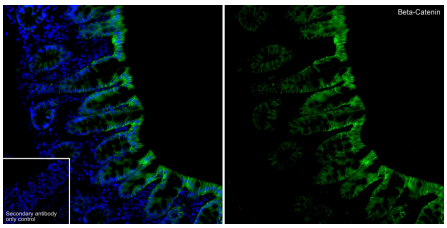

Fig2: Application: IHC-Fr

Species: Mouse

Site: colon

Sample: Frozen section

Antibody concentration: 1/200

Antigen retrieval: Not required

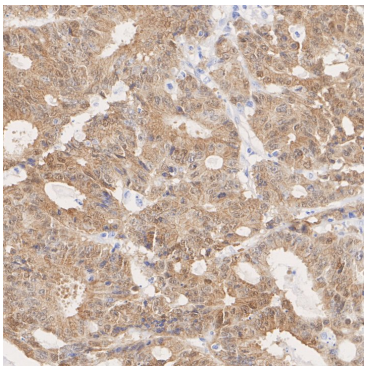

Fig3: Immunohistochemical analysis of paraffin-embedded human colon cancer tissue with Rat anti-Beta Catenin antibody (HA601570) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601570) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

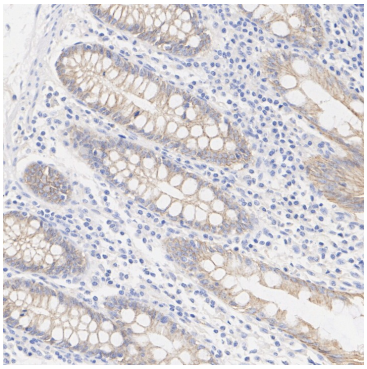

Fig4: Immunohistochemical analysis of paraffin-embedded human colon tissue with Rat anti-Beta Catenin antibody (HA601570) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601570) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

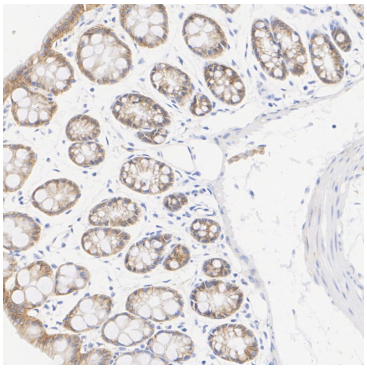

Fig5: Immunohistochemical analysis of paraffin-embedded mouse colon tissue with Rat anti-Beta Catenin antibody (HA601570) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601570) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

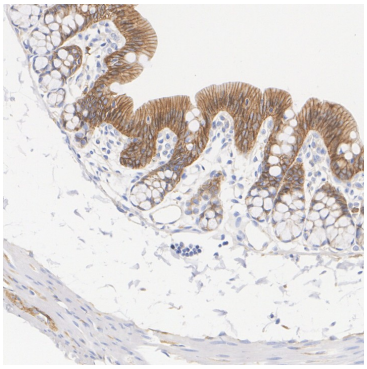

Fig6: Immunohistochemical analysis of paraffin-embedded rat colon tissue with Rat anti-Beta Catenin antibody (HA601570) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601570) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

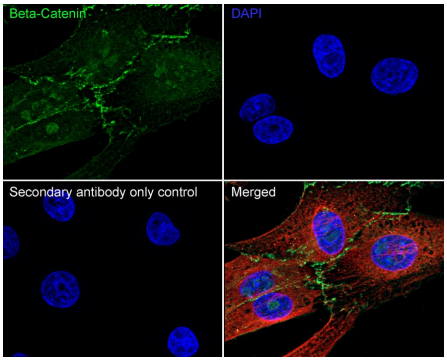

Fig7: Immunocytochemistry analysis of C6 cells labeling Beta Catenin with Rat anti-Beta Catenin antibody (HA601570) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 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 Rat anti-Beta Catenin antibody (HA601570) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rat IgG H&L (iFluor™ 488, HA1133) 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 (HA601187, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

Background References

1. Liu J et al. Wnt/beta-catenin signalling: function, biological mechanisms, and therapeutic opportunities. Signal Transduct Target Ther. 2022 Jan
2. Yu F et al. Wnt/beta-catenin signaling in cancers and targeted therapies. Signal Transduct Target Ther. 2021 Aug