SANTA CRUZ BIOTECHNOLOGY, INC.

APC (ALi 12-28): sc-53165



BACKGROUND

The adenomatous polyposis syndromes, familial adenomatous polyposis (FAP) and Gardner's syndrome (GS), are characterized by numerous adenomatous polyps throughout the entire colon. These polyps invariably progress to colon cancer in addition to other extracolonic manifestations. The cloning of the APC gene revealed a ubiquitously expressed protein, 2,843 amino acids in length, which is frequently mutated in patients suffering from FAP and GS. APC has been found to be associated with structural components of intracellular junctions. β -catenin and γ -catenin (also called plakoglobin), are involved in the regulation of cellular adhesion. APC and E-cadherin compete for binding to specific internal regions of both β - and γ -catenin. Interactions between cytoskeleton and the APC, E-cadherin, β/γ catenin complex are mediated by α -catenin.

CHROMOSOMAL LOCATION

Genetic locus: APC (human) mapping to 5q22.2.

SOURCE

APC (ALi 12-28) is a mouse monoclonal antibody raised against amino acids 1-433 of APC of human origin.

PRODUCT

Each vial contains 200 $\mu g\, lgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APC (ALi 12-28) is available conjugated to agarose (sc-53165 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53165 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53165 PE), fluorescein (sc-53165 FITC), Alexa Fluor[®] 488 (sc-53165 AF488), Alexa Fluor[®] 546 (sc-53165 AF546), Alexa Fluor[®] 594 (sc-53165 AF594) or Alexa Fluor[®] 647 (sc-53165 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-53165 AF680) or Alexa Fluor[®] 790 (sc-53165 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

APC (ALi 12-28) is recommended for detection of APC of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for APC siRNA (h): sc-29702, APC shRNA Plasmid (h): sc-29702-SH and APC shRNA (h) Lentiviral Particles: sc-29702-V.

Molecular Weight of APC: 110-310 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA





truncated APC expression COLO 320DM whole cell

APC (ALi 12-28): sc-53165. Western blot analysis of APC expression in untreated (**A**) and chemically-treated (**B**) HCT-116 whole cell lysates. β -Actin (C4): sc-47778 used as loading control. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

SELECT PRODUCT CITATIONS

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- 3. Tran, H. and Polakis, P. 2012. Reversible modification of adenomatous polyposis coli (APC) with K63-linked polyubiquitin regulates the assembly and activity of the β -catenin destruction complex. J. Biol. Chem. 287: 28552-28563.
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- 5. Wang, L., et al. 2014. Regulation of the phosphorylation and nuclear import and export of β -catenin by APC and its cancer-related truncated form. J. Cell Sci. 127: 1647-1659.
- Tanaka, N., et al. 2017. APC mutations as a potential biomarker for sensitivity to tankyrase inhibitors in colorectal cancer. Mol. Cancer Ther. 16: 752-762.
- Liu, Q., et al. 2019. Upregulation of musashi1 increases malignancy of hepatocellular carcinoma via the Wnt/β-catenin signaling pathway and predicts a poor prognosis. BMC Gastroenterol. 19: 230.
- Dietinger, V., et al. 2020. Wnt-driven LARGE2 mediates Laminin-adhesive O-glycosylation in human colonic epithelial cells and colorectal cancer. Cell Commun. Signal. 18: 102.
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PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.