SANTA CRUZ BIOTECHNOLOGY, INC.

APC (c-APC 28.9): sc-53166

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

REFERENCES

1. Nishisho, I., et al. 1991. Mutations of chromosome 5q21 genes in FAP and colorectal cancer patients. Science 253: 665-669.
2. Olschwang, S., et al. 1995. High resolution genetic map of the adenomatous polyposis coli gene (APC) region. Am. J. Med. Gen. 56: 413-419.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611731. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Janssen, K.P., et al. 2006. APC and oncogenic KRAS are synergistic in enhancing Wnt signaling in intestinal tumor formation and progression. Gastroenterology 131: 1096-1109.
5. Sansom, O.J., et al. 2007. Myc deletion rescues Apc deficiency in the small intestine. Nature 446: 676-679.
6. Cetta, F., et al. 2007. Germ-line and somatic mutations of the APC gene and/or ss catenin gene in the occurrence of FAP associated thyroid carcinoma. World J. Surg. 31: 1366-1367
7. Whitehead, J., et al. 2008. Mechanical factors activate β-catenin-dependent oncogene expression in APC mouse colon. HFSP J. 2: 286-294.

CHROMOSOMAL LOCATION

Genetic locus: APC (human) mapping to 5q22.2; Apc (mouse) mapping to 18 B1.

SOURCE

APC (c-APC 28.9) is a mouse monoclonal antibody raised against the C-terminus of APC of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

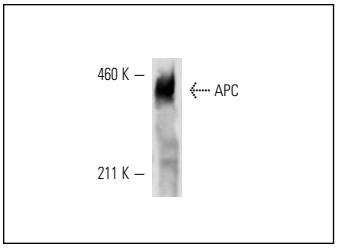
APC (c-APC 28.9) is recommended for detection of APC of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for APC siRNA (h): sc-29702, APC siRNA (m): sc-29703, APC shRNA Plasmid (h): sc-29702-SH, APC shRNA Plasmid (m): sc-29703-SH, APC shRNA (h) Lentiviral Particles: sc-29702-V and APC shRNA (m) Lentiviral Particles: sc-29703-V.

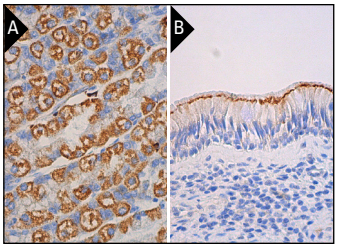
Molecular Weight of APC: 110-310 kDa.

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

DATA



APC (c-APC 28.9): sc-53166. Western blot analysis of APC expression in HeLa whole cell lysate.



APC (c-APC 28.9): sc-53166. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human nasopharynx tissue showing apical membrane staining of respiratory epithelial cells (**B**).

RESEARCH USE

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

PROTOCOLS

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

CONJUGATES

See **APC (F-3): sc-9998** for APC antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.