SANTA CRUZ BIOTECHNOLOGY, INC.

APC7 (H-300): sc-20987

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The anaphase-promoting complex (APC) is composed of more than ten subunits, including APC1, APC2, APC4, APC5, APC7, APC8, APC10, and APC11. The APC acts in a cell-cycle dependent manner to promote the separation of sister chromatids during the transition between metaphase and anaphase in mitosis. APC, or cyclosome, accomplishes this progression through the ubiquitination of mitotic cyclins and other regulatory proteins that are targeted for destruction during cell division. APC is phosphorylated, and thus activated, by protein kinases Cdk1/cyclin B and polo-like kinase (Plk). APC is under tight control by a number of regulatory factors, including CDC20, CDH1 and MAD2. Specifically, CDC20 and CDH1 directly bind to and activate the cyclin-ubiquitination activity of APCs. In contrast, MAD2 inhibits APC by forming a ternary complex with CDC20 and APC, thus preventing APC activation. APC7, also known as ANAPC7, is a subunit of APC that mediates the interaction of APC with the transcription coactivators CBP and p300.

CHROMOSOMAL LOCATION

Genetic locus: ANAPC7 (human) mapping to 12q24.11; Anapc7 (mouse) mapping to 5 F.

SOURCE

APC7 (H-300) is a rabbit polyclonal antibody raised against amino acids 266-565 mapping at the C-terminus of APC7 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

APC7 (H-300) is recommended for detection of APC7 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

APC7 (H-300) is also recommended for detection of APC7 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for APC7 siRNA (h): sc-29706, APC7 siRNA (m): sc-29707, APC7 shRNA Plasmid (h): sc-29706-SH, APC7 shRNA Plasmid (m): sc-29707-SH, APC7 shRNA (h) Lentiviral Particles: sc-29706-V and APC7 shRNA (m) Lentiviral Particles: sc-29707-V.

Molecular Weight of APC7: 66 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, MCF7 nuclear extract: sc-2149 or ZR-75-1 cell lysate: sc-2241.

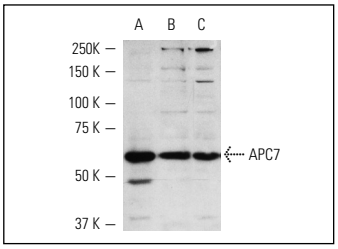
STORAGE

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

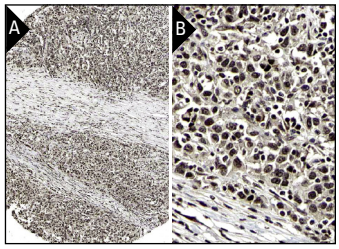
RESEARCH USE

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

DATA



APC7 (H-300): sc-20987. Western blot analysis of APC7 expression in HeLa (**A**) and MCF7 (**B**) nuclear extracts and ZR-75-1 whole cell lysate (**C**).



APC7 (H-300): sc-20987. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urothelial cancer tissue showing nuclear and cytoplasmic staining of tumor cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Robson, R.M., et al. 2004. Muscle intermediate filament proteins. Methods Cell Biol. 78: 519-553.
2. Park, K.H., et al. 2005. Downregulation of the anaphase-promoting complex APC7 in invasive ductal carcinomas of the breast and its clinicopathologic relationships. Breast Cancer Res. 7: R238-R247.
3. Turnell, A.S., et al. 2005. The APC/C and CBP/p300 cooperate to regulate transcription and cell-cycle progression. Nature 438: 690-695.
4. Tran, K., et al. 2008. Accumulation of substrates of the anaphase-promoting complex (APC) during human Cytomegalovirus infection is associated with the phosphorylation of Cdh1 and the dissociation and relocalization of APC subunits. J. Virol. 82: 529-537.
5. Sugimoto, N., et al. 2008. Identification of novel human Cdt1-binding proteins by a proteomics approach: proteolytic regulation by APC/CCdh1. Mol. Biol. Cell 19: 1007-1021.

PROTOCOLS

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