SANTA CRUZ BIOTECHNOLOGY, INC.

APC4 (B-11): sc-514895

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. APC4, also known as ANAPC4, is an 808 amino acid component of the APC.

REFERENCES

1. Jorgensen, P.M., et al. 1998. A subunit of the anaphase-promoting complex is a centromere-associated protein in mammalian cells. Mol. Cell. Biol. 18: 468-476.
2. Page, A.M., et al. 1999. The anaphase-promoting complex: new subunits and regulators. Annu. Rev. Biochem. 68: 583-609.
3. Peters, J.M. 1999. Subunits and substrates of the anaphase-promoting complex. Exp. Cell. Res. 248: 339-349.
4. Fang, G., et al. 1999. Control of mitotic transitions by the anaphase-promoting complex. Philos. Trans. R. Soc. Lond., B Biol. Sci. 354: 1583-1590.

CHROMOSOMAL LOCATION

Genetic locus: ANAPC4 (human) mapping to 4p15.2; Anapc4 (mouse) mapping to 5 C1.

SOURCE

APC4 (B-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 788-809 near the C-terminus of APC4 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.

APC4 (B-11) is available conjugated to agarose (sc-514895 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514895 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514895 PE), fluorescein (sc-514895 FITC), Alexa Fluor® 488 (sc-514895 AF488), Alexa Fluor® 546 (sc-514895 AF546), Alexa Fluor® 594 (sc-514895 AF594) or Alexa Fluor® 647 (sc-514895 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514895 AF680) or Alexa Fluor® 790 (sc-514895 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514895 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

APC4 (B-11) is recommended for detection of APC4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for APC4 siRNA (h): sc-29704, APC4 siRNA (m): sc-29705, APC4 shRNA Plasmid (h): sc-29704-SH, APC4 shRNA Plasmid (m): sc-29705-SH, APC4 shRNA (h) Lentiviral Particles: sc-29704-V and APC4 shRNA (m) Lentiviral Particles: sc-29705-V.

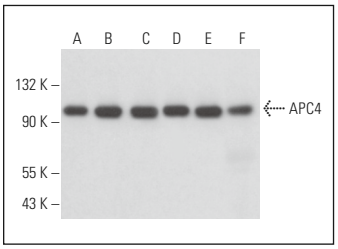
Molecular Weight of APC4: 100 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MCF7 whole cell lysate: sc-2206 or IMR-32 cell lysate: sc-2409.

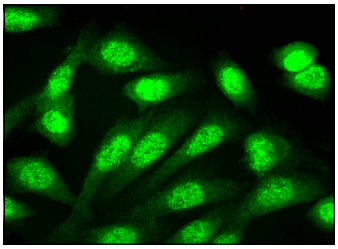
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



APC4 (B-11): sc-514895. Western blot analysis of APC4 expression in HeLa (**A**), K-562 (**B**), THP-1 (**C**), Neuro-2A (**D**) and C6 (**E**) whole cell lysates and rat testis tissue extract (**F**).



APC4 (B-11): sc-514895. Immunofluorescence staining of formalin-fixed SW480 cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Liu, W., et al. 2023. PQBP1 regulates striatum development through balancing striatal progenitor proliferation and differentiation. Cell Rep. 42: 112277.

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.