

APC8 (D-7): sc-514006

BACKGROUND

Composed of more than ten subunits, the anaphase-promoting complex (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 APC and activate the cyclin-ubiquitination activity of APCs. In contrast, MAD2 inhibits APC by forming a ternary complex with CDC20 and APC and thus preventing APC activation. APC8, also referred to as CDC23, contains nine tetratricopeptide repeat (TPR) units. The TPR is a 34 amino acid sequence that is common to a variety of proteins and is significant because it forms scaffolds to mediate protein-protein interactions. The APC8 gene maps to human chromosome 5q31.2, within the smallest commonly deleted segment in myeloid leukemias.

REFERENCES

- 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.
- Zhao, N., et al. 1998. Protein Human CDC23: cDNA cloning, mapping to 5q31, genomic structure, and evaluation as a candidate tumor suppressor gene in myeloid leukemias. *Genomics* 53: 184-190.
- Das, A.K., et al. 1998. The structure of the tetratricopeptide repeats of protein phosphatase 5: implications for TPR-mediated protein-protein interactions. *EMBO J.* 17: 1192-1199.

CHROMOSOMAL LOCATION

Genetic locus: CDC23 (human) mapping to 5q31.2; Cdc23 (mouse) mapping to 18 B1.

SOURCE

APC8 (D-7) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of APC8 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APC8 (D-7) is available conjugated to agarose (sc-514006 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514006 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514006 PE), fluorescein (sc-514006 FITC), Alexa Fluor® 488 (sc-514006 AF488), Alexa Fluor® 546 (sc-514006 AF546), Alexa Fluor® 594 (sc-514006 AF594) or Alexa Fluor® 647 (sc-514006 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514006 AF680) or Alexa Fluor® 790 (sc-514006 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

APC8 (D-7) is recommended for detection of APC8 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 APC8 siRNA (h): sc-37530, APC8 siRNA (m): sc-37531, APC8 shRNA Plasmid (h): sc-37530-SH, APC8 shRNA Plasmid (m): sc-37531-SH, APC8 shRNA (h) Lentiviral Particles: sc-37530-V and APC8 shRNA (m) Lentiviral Particles: sc-37531-V.

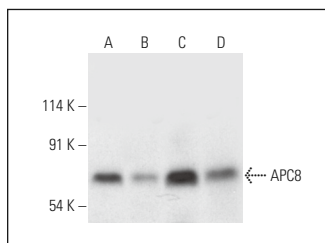
Molecular Weight of APC8: 68 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or HL-60 whole cell lysate: sc-2209.

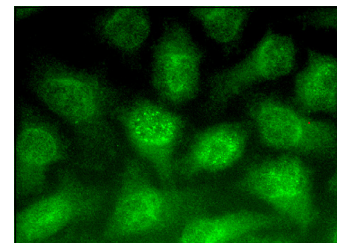
RECOMMENDED SUPPORT REAGENTS

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



APC8 (D-7): sc-514006. Western blot analysis of APC8 expression in HeLa (A), SK-N-SH (B), K-562 (C) and HL-60 (D) whole cell lysates.



APC8 (D-7): sc-514006. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Lau, H.W., et al. 2021. Quantitative differences between cyclin-dependent kinases underlie the unique functions of CDK1 in human cells. *Cell Rep.* 37: 109808.

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.