SANTA CRUZ BIOTECHNOLOGY, INC.

# APC8 (H-300): sc-20988

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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


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. 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.
3. 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.
4. Page, A.M., et al. 1999. The anaphase-promoting complex: new subunits and regulators. Annu. Rev. Biochem. 68: 583-609.
5. Peters, J.M. 1999. Subunits and substrates of the anaphase-promoting complex. Exp. Cell Res. 248: 339-349.
6. 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.
7. Bolte, M., et al. 2002. Inhibition of APC-mediated proteolysis by the meiosis-specific protein kinase Ime2. Proc. Natl. Acad. Sci. USA 99: 4385-4390.


## CHROMOSOMAL LOCATION

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

## SOURCE

APC8 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of APC8 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

APC8 (H-300) is recommended for detection of APC8 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

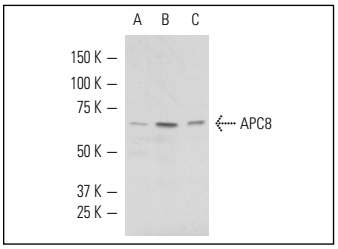
APC8 (H-300) is also recommended for detection of APC8 in additional species, including canine and bovine.

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.

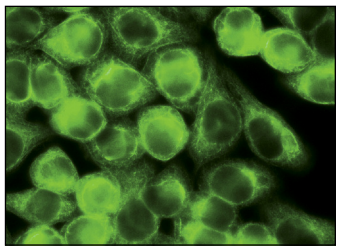
Molecular Weight of APC8: 68 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, NIH/3T3 nuclear extract: sc-2138 or SK-N-SH cell lysate: sc-2410.

## DATA




APC8 (H-300): sc-20988. Western blot analysis of APC8 expression in HeLa (**A**) and NIH/3T3 (**B**) nuclear extracts and SK-N-SH whole cell lysate (**C**).



APC8 (H-300): sc-20988. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization.

## SELECT PRODUCT CITATIONS


1. Baugh, J.M., et al. 2009. Proteasomes can degrade a significant proportion of cellular proteins independent of ubiquitination. J. Mol. Biol. 386: 814-827.


## 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.