SANTA CRUZ BIOTECHNOLOGY, INC.

Cdc34 (H-81): sc-5616

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cell cycle events are regulated by the sequential activation and deactivation of cyclin dependent kinases (Cdks) and by the proteolysis of cyclins. The cell division cycle (Cdc) genes are required at various points in the cell cycle. Cdc25A, Cdc25B and Cdc25C protein tyrosine phosphatases function as mitotic activators by dephosphorylating Cdc2 p34 on regulatory tyrosine residues. Cdc6 is the human homolog of *Saccharomyces cerevisiae* Cdc6, which is involved in the initiation of DNA replication. Cdc37 appears to facilitate Cdk4/cyclin D1 complex formation and has been shown to form a stable complex with HSP 90. Cdc34, Cdc27 and Cdc16 function as ubiquitin-conjugating enzymes. Cdc34 is thought to be the structural and functional homolog of *Saccharomyces cerevisiae* Cdc34, which is essential for the G_1 to S phase transition. Cdc16 and Cdc27 are components of the APC (anaphase-promoting complex) which ubiquitinates cyclin B, resulting in cyclin B/Cdk complex degradation.

CHROMOSOMAL LOCATION

Genetic locus: CDC34 (human) mapping to 19p13.3; Cdc34 (mouse) mapping to 10 C1.

SOURCE

Cdc34 (H-81) is a rabbit polyclonal antibody raised against amino acids 144-224 mapping near the C-terminus of Cdc34 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.

RESEARCH USE

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

APPLICATIONS

Cdc34 (H-81) is recommended for detection of Cdc34 of mouse 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).

Cdc34 (H-81) is also recommended for detection of Cdc34 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Cdc34 siRNA (h): sc-35042, Cdc34 siRNA (m): sc-37554, Cdc34 shRNA Plasmid (h): sc-35042-SH, Cdc34 shRNA Plasmid (m): sc-37554-SH, Cdc34 shRNA (h) Lentiviral Particles: sc-35042-V and Cdc34 shRNA (m) Lentiviral Particles: sc-37554-V.

Molecular Weight (predicted) of Cdc34: 27 kDa.

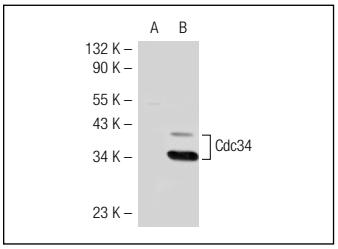
Molecular Weight (observed) of Cdc34: 34 kDa.

Positive Controls: Cdc34 (m): 293T Lysate: sc-119127, A-431 nuclear extract: sc-2122 or HeLa nuclear extract: sc-2120.

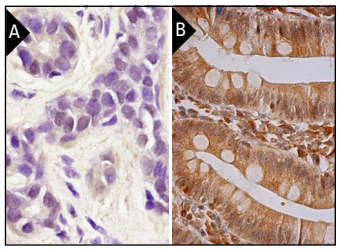
STORAGE

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

DATA



Cdc34 (H-81): sc-5616. Western blot analysis of Cdc34 expression in non-transfected: sc-117752 (**A**) and mouse Cdc34 transfected: sc-119127 (**B**) 293T whole cell lysates.



Cdc34 (H-81): sc-5616. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tumor showing nuclear and cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing nuclear and cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Saville, M.K., et al. 2004. Regulation of p53 by the ubiquitin-conjugating enzymes UBCH5B/C *in vivo*. J. Biol. Chem. 279: 42169-42181.
2. Legesse-Miller, A., et al. 2009. Let-7 overexpression leads to an increased fraction of cells in G_2/M, direct downregulation of Cdc34, and stabilization of Wee 1 kinase in primary fibroblasts. J. Biol. Chem. 284: 6605-6609.
3. Liu, J., et al. 2011. Virus infection disturbs cyclin expression, leading to cell cycle arrest in the unicellular marine algae *Emiliania huxleyi* and *Chrysochromulina ericina*. Afr. J. Microbiol. Res. 5: 1801-1807.
4. Kim, C.W., et al. 2012. Ectopic over-expression of tristetraprolin in human cancer cells promotes biogenesis of let-7 by down-regulation of Lin28. Nucleic Acids Res. 40: 3856-3869.

PROTOCOLS

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