

Cdc16 (F-4): sc-365788

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 Hsp90. 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 G₁/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.

REFERENCES

1. Palmer, R.E., et al. 1990. Mitotic transmission of artificial chromosomes in Cdc mutants of the yeast, *Saccharomyces cerevisiae*. *Genetics* 125: 763-774.
2. Gautier, J., et al. 1991. Cdc25 is a specific tyrosine phosphatase that directly activates p34^{cdc2}. *Cell* 67: 197-211.
3. Plon, S.E., et al. 1993. Cloning of the human homolog of the CDC34 cell cycle gene by complementation in yeast. *Proc. Natl. Acad. Sci. USA* 90: 10484-10488.
4. King, R.W., et al. 1995. A 20S complex containing CDC27 and CDC16 catalyzes the mitosis-specific conjugation of ubiquitin to cyclin B. *Cell* 81: 279-288.
5. Barinaga, M. 1995. A new twist to the cell cycle. *Science* 269: 631-632.
6. Stepanova, L., et al. 1996. Mammalian p50^{Cdc37} is a protein kinase-targeting subunit of Hsp90 that binds and stabilizes Cdk4. *Genes Dev.* 10: 1491-1502.
7. Williams, R.S., et al. 1997. A human protein related to yeast Cdc6p. *Proc. Natl. Acad. Sci. USA* 94: 142-147.
8. Yang, S., et al. 2007. Identification of genes with correlated patterns of variations in DNA copy number and gene expression level in gastric cancer. *Genomics* 89: 451-459.

CHROMOSOMAL LOCATION

Genetic locus: CDC16 (human) mapping to 13q34; Cdc16 (mouse) mapping to 8 A1.1.

SOURCE

Cdc16 (F-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-26 at the N-terminus of Cdc16 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Cdc16 (F-4) is recommended for detection of Cdc16 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).

Cdc16 (F-4) is also recommended for detection of Cdc16 in additional species, including canine and bovine.

Suitable for use as control antibody for Cdc16 siRNA (h): sc-35035, Cdc16 siRNA (m): sc-35036, Cdc16 shRNA Plasmid (h): sc-35035-SH, Cdc16 shRNA Plasmid (m): sc-35036-SH, Cdc16 shRNA (h) Lentiviral Particles: sc-35035-V and Cdc16 shRNA (m) Lentiviral Particles: sc-35036-V.

Molecular Weight of Cdc16: 77 kDa.

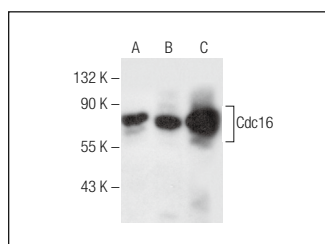
Positive Controls: NIH/3T3 whole cell lysate, HuT 78 whole cell lysate: sc-2208 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SUPPORT REAGENTS

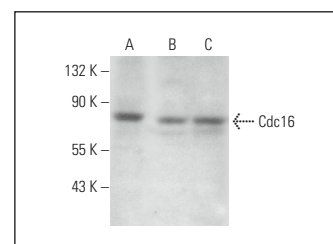
To ensure optimal results, the following support reagents are recommended:

- 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



Cdc16 (F-4): sc-365788. Western blot analysis of Cdc16 expression in Jurkat (A), HuT 78 (B) and NIH/3T3 (C) whole cell lysates.



Cdc16 (F-4): sc-365788. Western blot analysis of Cdc16 expression in BYDP (A), CCRF-CEM (B) and A2058 (C) whole cell lysates.

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.