

# Cdc16 (K-16): sc-6395

## 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<sub>1</sub> 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: CDC16 (human) mapping to 13q34; Cdc16 (mouse) mapping to 8 A1.1.

## SOURCE

Cdc16 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Cdc16 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.

Blocking peptide available for competition studies, sc-6395 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Cdc16 (K-16) is recommended for detection of Cdc16 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), 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).

Cdc16 (K-16) is also recommended for detection of Cdc16 in additional species, including equine, canine, bovine and porcine.

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.

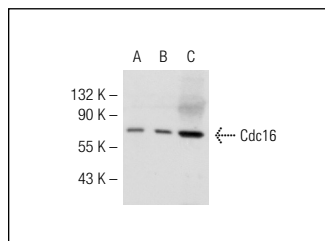
Molecular Weight of Cdc16: 77 kDa.

Positive Controls: Cdc 16 (h): 293T Lysate: sc-115568, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

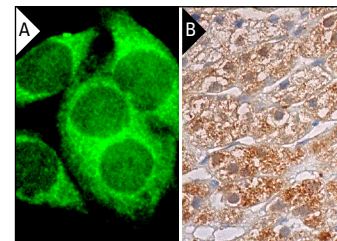
## STORAGE

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

## DATA



Cdc16 (K-16): sc-6395. Western blot analysis of Cdc16 expression in non-transfected 293T: sc-117752 (A), human Cdc16 transfected 293T: sc-115568 (B) and HeLa (C) whole cell lysates.



Cdc16 (K-16): sc-6395. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic and nuclear staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

1. Stroschein, S.L., et al. 2001. Smad3 recruits the anaphase-promoting complex for ubiquitination and degradation of SnoN. *Genes Dev.* 21: 2822-2836.
2. Jeganathan, K.B., et al. 2005. The Rae1-Nup98 complex prevents aneuploidy by inhibiting securin degradation. *Nature* 438: 1036-1039.
3. Binne, U.K., et al. 2007. Retinoblastoma protein and anaphase-promoting complex physically interact and functionally cooperate during cell-cycle exit. *Nat. Cell Biol.* 9: 225-232.
4. Tipton, A.R., et al. 2011. Closed MAD2 (C-MAD2) is selectively incorporated into the mitotic checkpoint complex (MCC). *Cell Cycle* 10: 3740-3750.
5. Izawa, D., et al. 2012. Mad2 and the APC/C compete for the same site on Cdc20 to ensure proper chromosome segregation. *J. Cell Biol.* 199: 27-37.
6. Sedgwick, G.G., et al. 2012. Mechanisms controlling the temporal degradation of Nek2A and Kif18A by the APC/C-Cdc20 complex. *EMBO J.* 32: 303-314.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **Cdc16 (D-1): sc-376091** or **Cdc16 (E-4): sc-365636**, our highly recommended monoclonal alternatives to Cdc16 (K-16).