SANTA CRUZ BIOTECHNOLOGY, INC.

Cdc16 (E-4): sc-365636

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

SOURCE

Cdc16 (E-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 581-609 near the C-terminus of Cdc16 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-365636 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Cdc16 (E-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), 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 (E-4) is also recommended for detection of Cdc16 in additional species, including equine, 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.

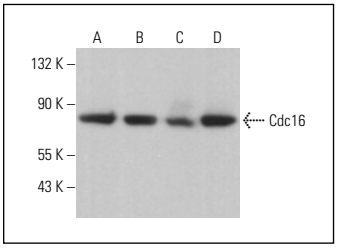
Molecular Weight of Cdc16: 77 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, C6 whole cell lysate: sc-364373 or 3611-RF whole cell lysate: sc-2215.

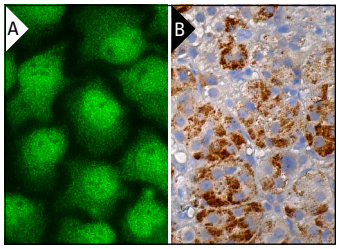
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Cdc16 (E-4): sc-365636. Western blot analysis of Cdc16 expression in HeLa (**A**), CCRF-CEM (**B**), 3611-RF (**C**) and C6 (**D**) whole cell lysates.



Cdc16 (E-4): sc-365636. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Link, L.A., et al. 2016. PCBP1/HNRNP E1 protects chromosomal integrity by translational regulation of Cdc27. Mol. Cancer Res. 14: 634-646.
2. Kim, E.J., et al. 2019. YDJC induces epithelial-mesenchymal transition via escaping from interaction with Cdc16 through ubiquitination of PP2A. J. Oncol. 2019: 3542537.
3. Adell, M.A.Y., et al. 2023. Adaptation to spindle assembly checkpoint inhibition through the selection of specific aneuploidies. Genes Dev. 37: 171-190.

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.

PROTOCOLS

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