

Cdc6 (DCS-180): sc-56273

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 G₁ 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.

REFERENCES

- Palmer, R.E., et al. 1990. Mitotic transmission of artificial chromosomes in Cdc mutants of the yeast, *Saccharomyces cerevisiae*. *Genetics* 125: 763-774.
- Gautier, J., et al. 1991. Cdc25 is a specific tyrosine phosphatase that directly activates p34^{Cdc2}. *Cell* 67: 197-211.

CHROMOSOMAL LOCATION

Genetic locus: CDC6 (human) mapping to 17q21.2; Cdc6 (mouse) mapping to 11 D.

SOURCE

Cdc6 (DCS-180) is a mouse monoclonal antibody raised against full length Cdc6 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Cdc6 (DCS-180) is recommended for detection of Cdc6 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).

Suitable for use as control antibody for Cdc6 siRNA (h): sc-29258, Cdc6 siRNA (m): sc-35046, Cdc6 shRNA Plasmid (h): sc-29258-SH, Cdc6 shRNA Plasmid (m): sc-35046-SH, Cdc6 shRNA (h) Lentiviral Particles: sc-29258-V and Cdc6 shRNA (m) Lentiviral Particles: sc-35046-V.

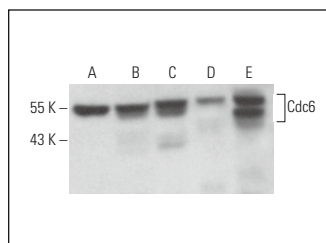
Molecular Weight of Cdc6: 62 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, BYDP whole cell lysate: sc-364368 or SP2/O whole cell lysate: sc-364795.

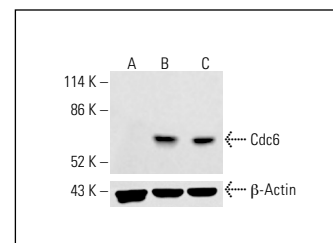
RECOMMENDED SUPPORT REAGENTS

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



Cdc6 (DCS-180): sc-56273. Western blot analysis of Cdc6 expression in HeLa (A), SK-BR-3 (B), NCI-H929 (C), BYDP (D) and SP2/O (E) whole cell lysates.



Cdc6 (DCS-180): sc-56273. Western blot analysis of Cdc6 expression in untreated (A) and chemically-treated (B, C) HeLa whole cell lysates. β-Actin (C4): sc-47778 used as loading control. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

SELECT PRODUCT CITATIONS

- Fung, C., et al. 2013. p16^{INK4a} deficiency promotes DNA hyper-replication and genetic instability in melanocytes. *Pigment Cell Melanoma Res.* 26: 236-246.
- Kurosaki, T., et al. 2018. NMD-degradome sequencing reveals ribosome-bound intermediates with 3'-end non-templated nucleotides. *Nat. Struct. Mol. Biol.* 25: 940-950.

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.



See **Cdc6 (180.2): sc-9964** for Cdc6 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.