

Cdc5 (yN-19): sc-6732

BACKGROUND

Cell cycle progression is controlled at a point late in G₁ designated Start. Passage through Start requires the activity of the cyclin-dependent protein kinase Cdc28. Transition from G₁ to S phase requires the association of Cdc28 with members of the G₁ cyclin family. Exit from mitosis and initiation of the next cell cycle requires a complex of proteins designated the anaphase-promoting complex (APC). This complex consists of two proteins, Cdc16 and Cdc27 (also referred to as Snb1), which are involved in limiting DNA replication to once per cell cycle. Cdc23, another component of the APC, is required for both entering and exiting anaphase, and is important for the proper separation of sister chromatids. The APC is thought to be stabilized by Cdc26 (also known as Scd26). In addition to APC proteins mentioned, Cdc5 is also required for completion of mitosis. In contrast, Cdc20 acts as a DNA-damage induced checkpoint, preventing mitosis when DNA damage has occurred.

REFERENCES

1. Sherlock, G., et al. 1993. Starting to cycle: G₁ controls regulating cell division in budding yeast. *J. Gen. Microbiol.* 139: 2531-2541.
2. Imniger, S., et al. 1995. Genes involved in sister chromatid separation are needed for B-type cyclin proteolysis in budding yeast. *Cell* 81: 269-278.
3. Levine, K., et al. 1996. *Saccharomyces cerevisiae* G₁ cyclins differ in their intrinsic functional specificities. *Mol. Cell. Biol.* 16: 6794-6803.
4. Heichman, K.A., et al. 1996. The yeast Cdc16 and Cdc27 genes restrict DNA replication to once per cell cycle. *Cell* 85: 39-48.
5. Zachariae, W., et al. 1996. Identification of subunits of the anaphase-promoting complex of *Saccharomyces cerevisiae*. *Science* 274: 1201-1204.
6. Hardy, C.F., et al. 1996. A novel role for Cdc5p in DNA replication. *Mol. Cell. Biol.* 16: 6775-6782.
7. Lim, H.H., et al. 1996. Cdc20, a β -transducin homologue, links RAD9-mediated G₂/M checkpoint control to mitosis in *Saccharomyces cerevisiae*. *Mol. Gen. Genet.* 253: 138-148.
8. Imniger, S., et al. 1997. The anaphase-promoting complex is required in G₁ arrested yeast cells to inhibit B-type cyclin accumulation and to prevent uncontrolled entry into S phase. *J. Cell Sci.* 110: 1523-1531.

SOURCE

Cdc5 (yN-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Cdc5 of *Saccharomyces cerevisiae* origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6732 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

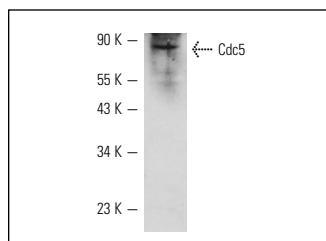
Cdc5 (yN-19) is recommended for detection of Cdc5 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Molecular Weight of Cdc5: 85 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Cdc5 (yN-19): sc-6732. Western blot analysis of Cdc5 expression in *S. cerevisiae* whole cell lysate.

SELECT PRODUCT CITATIONS

1. Oelschlaegel, T., et al. 2005. The yeast APC/C subunit Mnd2 prevents premature sister chromatid separation triggered by the meiosis-specific APC/C-Ama1. *Cell* 120: 773-788.
2. Vidanes, G.M., et al. 2010. CDC5 inhibits the hyperphosphorylation of the checkpoint kinase Rad53, leading to checkpoint adaptation. *PLoS Biol.* 8: e1000286.

STORAGE

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

PROTOCOLS

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