

Cdc5 (γ-300): sc-33625

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

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2. Imrigger, S. Pitatti, S., Michaelis, C. and Nasmyth, K. 1995. Genes involved in sister chromatid separation are needed for B-type cyclin proteolysis in budding yeast. *Cell* 81: 269-278.
3. Hardy, C.F. and Pautz, A. 1996. A novel role for Cdc5p in DNA replication. *Mol. Cell. Biol.* 16: 6775-6782.
4. Levine, K., Huang, K. and Cross, F.R. 1996. *Saccharomyces cerevisiae* G₁ cyclins differ in their intrinsic functional specificities. *Mol. Cell. Biol.* 16: 6794-6803.
5. Heichman, K.A. and Roberts, J.M. 1996. The yeast Cdc16 and Cdc27 genes restrict DNA replication to once per cell cycle. *Cell* 85: 39-48.
6. Zachariae, W., Shin, T.H., Galova, M., Obermaier, B. and Nasmyth, K. 1996. Identification of subunits of the anaphase-promoting complex of *Saccharomyces cerevisiae*. *Science* 274: 1201-1204.
7. Lim, H.H. and Surana, U. 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. Imrigger, S. and Nasmyth, K. 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 (γ-300) is a rabbit polyclonal antibody raised against amino acids 406-705 mapping at the C-terminus of Cdc5 of *Saccharomyces cerevisiae* origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

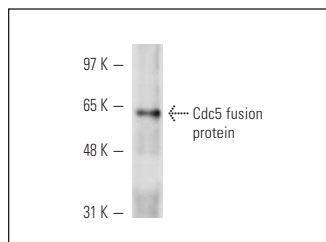
Cdc5 (γ-300) is recommended for detection of Cdc5 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 μg per 100–500 μg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Cdc5: 85 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Cdc5 (γ-300): sc-33625. Western blot analysis of yeast recombinant Cdc5 fusion protein.

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.