

Nap1 (D-2): sc-25342

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, including Cln1, Cln2 and Cln3 (also designated Daf1 or Whi1). The G₂ to M phase transition requires the M phase cyclins, Clb1 (also referred to as SCB1) and Clb2, as well as the G₂ cyclins, Clb3 and Clb4. CLB2 is bound by Nap1, a protein required for Clb2 to function in specific mitotic events. Nap1 is also required for Clb2 to induce the transition from polar to isotropic bud growth.

REFERENCES

1. Nasmyth, K. 1993. Control of the yeast cell cycle by the Cdc28 protein kinase. *Curr. Opin. Cell Biol.* 5: 166-179.
2. Sherlock, G. and Rosamond, J. 1993. Starting to cycle: G₁ controls regulating cell division in budding yeast. *J. Gen. Microbiol.* 139: 2531-2541.
3. Amon, A., et al. 1993. Mechanisms that help the yeast cell cycle clock tick: G₂ cyclins transcriptionally activate G₂ cyclins and repress G₁ cyclins. *Cell* 74: 993-1007.
4. Kellogg, D.R., et al. 1995. Members of the NAP/SET family of proteins interact specifically with B-type cyclins. *J. Cell Biol.* 130: 661-673.
5. Kellogg, D.R. and Murray, A.W. 1995. Nap1 acts with Clb1 to perform mitotic functions and to suppress polar bud growth in budding yeast. *J. Cell Biol.* 130: 675-685.
6. Levine, K., et al. 1996. *Saccharomyces cerevisiae* G₁ cyclins differ in their intrinsic functional specificities. *Mol. Cell. Biol.* 16: 6794-6803.
7. Blondel, M. and Mann, C. 1996. G₂ cyclins are required for the degradation of G₁ cyclins in yeast. *Nature* 384: 279-282.
8. Altman, R. and Kellogg, D. 1997. Control of mitotic events by Nap1 and the Gin4 kinase. *J. Cell Biol.* 138: 119-130.

SOURCE

Nap1 (D-2) is a mouse monoclonal antibody raised against amino acids 1-417 of Nap1 of *S. cerevisiae* 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.

Nap1 (D-2) is available conjugated to agarose (sc-25342 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-25342 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-25342 PE), fluorescein (sc-25342 FITC), Alexa Fluor[®] 488 (sc-25342 AF488), Alexa Fluor[®] 546 (sc-25342 AF546), Alexa Fluor[®] 594 (sc-25342 AF594) or Alexa Fluor[®] 647 (sc-25342 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-25342 AF680) or Alexa Fluor[®] 790 (sc-25342 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

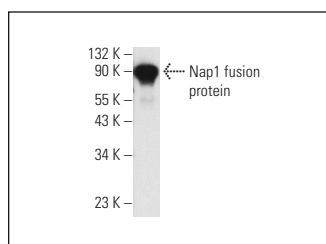
Nap1 (D-2) is recommended for detection of Nap1 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Nap1: 60 kDa.

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).

DATA



Nap1 (D-2): sc-25342. Western blot analysis of yeast recombinant Nap1 fusion protein.

SELECT PRODUCT CITATIONS

1. Seebart, C., et al. 2010. New nuclear partners for nucleosome assembly protein 1: unexpected associations. *Biochem. Cell Biol.* 88: 927-936.

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.