

Cdc2 p34 (8F1): sc-293470

BACKGROUND

In vertebrates, as in yeast, multiple cyclins have been identified, including a total of eight such regulatory proteins in mammals. In contrast to the situation in yeast, the Cdc2 p34 kinase is not the only catalytic subunit identified in vertebrates that can interact with cyclins. While Cdc2 p34 is essential for the G₂ to M transition in vertebrate cells, a second Cdc2-related kinase has also been implicated in cell cycle control. This protein, designated cyclin-dependent kinase 2 (Cdk2) p33, also binds to cyclins and its kinase activity is temporally regulated during the cell cycle. Several additional Cdc2 p34-related cyclin dependent kinases have been identified. These include Cdk3-Cdk8, PCTAIRE-1-3 and KKIALLRE.

REFERENCES

1. Riabowol, K., et al. 1989. The Cdc2 kinase is a nuclear protein that is essential for mitosis in mammalian cells. *Cell* 57: 393-401.
2. Morla, A.O., et al. 1989. Reversible tyrosine phosphorylation of Cdc2: dephosphorylation accompanies activation during entry into mitosis. *Cell* 58: 193-203.
3. Pines, J. and Hunter, T. 1989. Isolation of a human cyclin cDNA: evidence for cyclin mRNA and protein regulation in the cell cycle and for interaction with p34^{cdc2}. *Cell* 58: 833-846.
4. Kobayashi, H., et al. 1991. Cyclins and their partners during *Xenopus* oocyte maturation. *Cold Spring Harb. Symp. Quant. Biol.* 56: 56437-56447.

CHROMOSOMAL LOCATION

Genetic locus: CDK1 (human) mapping to 10q21.2; Cdk1 (mouse) mapping to 10 B5.3.

SOURCE

Cdc2 p34 (8F1) is a mouse monoclonal antibody raised against amino acids 211-297 representing partial length Cdc2 p34 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Cdc2 p34 (8F1) is recommended for detection of Cdc2 p34 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).

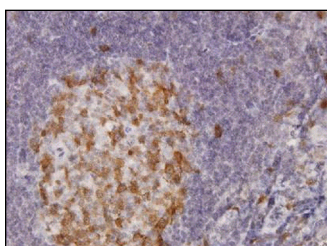
Suitable for use as control antibody for Cdc2 p34 siRNA (h): sc-29252, Cdc2 p34 siRNA (m): sc-29253, Cdc2 p34 shRNA Plasmid (h): sc-29252-SH, Cdc2 p34 shRNA Plasmid (m): sc-29253-SH, Cdc2 p34 shRNA (h) Lentiviral Particles: sc-29252-V and Cdc2 p34 shRNA (m) Lentiviral Particles: sc-29253-V.

Molecular Weight of Cdc2 p34: 34 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-CM (dilution range: 1:1000-1:10000), 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 m-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Cdc2 p34 (8F1): sc-293470. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic and nuclear staining of cells in germinal and non-germinal centers.

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 **Cdc2 p34 (17): sc-54** for Cdc2 p34 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.