

Cdk2 (M2): sc-163



The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: CDK2 (human) mapping to 12q13.2; Cdk2 (mouse) mapping to 10 D3.

SOURCE

Cdk2 (M2) is available as either rabbit (sc-163) or goat (sc-163-G) affinity purified polyclonal antibody raised against a peptide mapping at the C-terminus of Cdk2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-163 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-163 AC, 500 µg/0.25 ml agarose in 1 ml; and as HRP conjugate for Western blotting, sc-163 HRP, 200 µg/1 ml.

APPLICATIONS

Cdk2 (M2) is recommended for detection of Cdk2 of mouse, rat, human and hamster 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).

Cdk2 (M2) is also recommended for detection of Cdk2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Cdk2 siRNA (h): sc-29259, Cdk2 siRNA (m): sc-29260, Cdk2 shRNA Plasmid (h): sc-29259-SH, Cdk2 shRNA Plasmid (m): sc-29260-SH, Cdk2 shRNA (h) Lentiviral Particles: sc-29259-V and Cdk2 shRNA (m) Lentiviral Particles: sc-29260-V.

Molecular Weight of Cdk2: 34 kDa.

Positive Controls: Cdk2 (h2): 293T Lysate: sc-172351 or NAMALWA cell lysate: sc-2234.

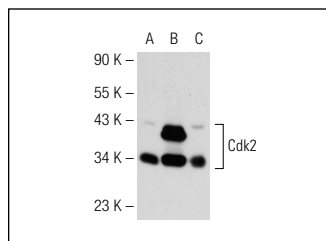
RESEARCH USE

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

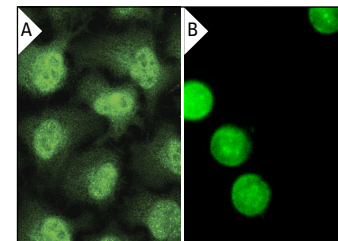
STORAGE

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

DATA



Cdk2 (M2)-G: sc-163-G. Western blot analysis of Cdk2 expression in non-transfected 293T: sc-117752 (A), human Cdk2 transfected 293T: sc-172351 (B) and NAMALWA (C) whole cell lysates.



Cdk2 (M2): sc-163. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunofluorescence staining of methanol-fixed SK-BR-3 cells showing nuclear localization (B).

SELECT PRODUCT CITATIONS

- Perkins, N.D., et al. 1997. Regulation of NFκB by cyclin dependent kinases associated with the p300 coactivator. *Science* 275: 523-527.
- Munoz-Alonso, M.J., et al. 2012. MYC accelerates p21CIP-induced megakaryocytic differentiation involving early mitosis arrest in leukemia cells. *J. Cell. Physiol.* 227: 2069-2078.
- Ferrández, N., et al. 2012. p21 as a transcriptional co-repressor of S-phase and mitotic control genes. *PLoS ONE* 7: e37759.
- Joaquin, M., et al. 2012. The p57 CDKi integrates stress signals into cell-cycle progression to promote cell survival upon stress. *EMBO J.* 31: 2952-2964.
- Ali, I., et al. 2012. Cadmium-induced effects on cellular signaling pathways in the liver of transgenic estrogen reporter mice. *Toxicol. Sci.* 127: 66-75.
- Kadekar, S., et al. 2012. Exocrine pancreatic carcinogenesis and autotaxin expression. *PLoS ONE* 7: e43209.
- Niziolek-Kierecka, M., et al. 2012. γH2AX, pChk1, and Wip1 as potential markers of persistent DNA damage derived from dibenzo[a,h]pyrene and PAH-containing extracts from contaminated soils. *Chem. Res. Toxicol.* 16: 862-872.
- Ortega, A., et al. 2012. Parathyroid hormone-related protein is a hypertrophy factor for human mesangial cells: Implications for diabetic nephropathy. *J. Cell. Physiol.* 227: 1980-1987.

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