

Cdk2 (H-298): sc-748

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 (H-298) is a rabbit polyclonal antibody raised against amino acids 1-298 representing full length 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.

APPLICATIONS

Cdk2 (H-298) is recommended for detection of Cdk2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Cdk2 (H-298) is also recommended for detection of Cdk2 in additional species, including equine, canine, bovine, porcine and avian.

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: A-431 whole cell lysate: sc-2201, Cdk2 (h): 293T Lysate: sc-172351 or HeLa whole cell lysate: sc-2200.

STORAGE

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

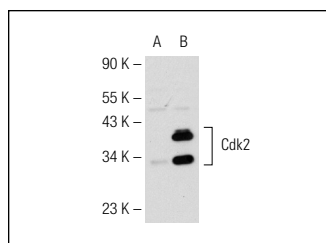
PROTOCOLS

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

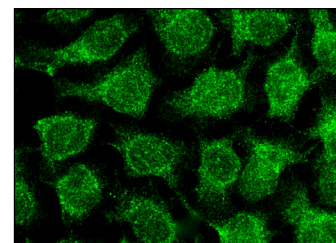
RESEARCH USE

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

DATA



Cdk2 (H-298): sc-748. Western blot analysis of Cdk2 expression in non-transfected: sc-117752 (A) and human Cdk2 transfected: sc-172351 (B) 293T whole cell lysates.



Cdk2 (H-298): sc-748. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Strobeck, M.W., et al. 2000. Restoration of retinoblastoma mediated signaling to Cdk2 results in cell cycle arrest. *Oncogene* 19: 1857-1867.
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3. Noguchi, T., et al. 2000. Involvement of cyclins in cell proliferation and their clinical implications in soft tissue smooth muscle tumors. *Am. J. Pathol.* 156: 2135-2147.
4. Rodríguez-Ubreva, F.J., et al. 2010. Knockdown of protein tyrosine phosphatase SHP-1 inhibits G₁/S progression in prostate cancer cells through the regulation of components of the cell-cycle machinery. *Oncogene* 29: 345-355.
5. Jia, Z.F., et al. 2010. Overexpression of septin 7 suppresses glioma cell growth. *J. Neurooncol.* 98: 329-340.
6. Hage-Sleiman, R., et al. 2011. Silencing of tubulin binding cofactor C modifies microtubule dynamics and cell cycle distribution and enhances sensitivity to gemcitabine in breast cancer cells. *Mol. Cancer Ther.* 10: 303-312.
7. Guo, X.X., et al. 2011. Cdk2 acts upstream of mitochondrial permeability transition during paclitaxel-induced apoptosis. *Protein Cell* 2: 543-553.
8. Ye, Z.W., et al. 2011. Silencing p110β prevents rapid depletion of nuclear pAkt. *Biochem. Biophys. Res. Commun.* 415: 613-618.
9. Pulvino, M., et al. 2012. Inhibition of proliferation and survival of diffuse large B-cell lymphoma cells by a small-molecule inhibitor of the ubiquitin-conjugating enzyme Ubc13-Uev1A. *Blood* 120: 1668-1677.



Try **Cdk2 (D-12): sc-6248** or **Cdk2 (AN4.3): sc-53220**, our highly recommended monoclonal alternatives to Cdk2 (H-298). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Cdk2 (D-12): sc-6248**.