

Cdc2 p34 (B-6): sc-8395

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: CDC2 (human) mapping to 10q21.2; Cdc2a (mouse) mapping to 10 B5.3.

SOURCE

Cdc2 p34 (B-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-30 near the N-terminus of Cdc2 p34 of human 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.

Cdc2 p34 (B-6) is available conjugated to agarose (sc-8395 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8395 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8395 PE), fluorescein (sc-8395 FITC), Alexa Fluor® 488 (sc-8395 AF488), Alexa Fluor® 546 (sc-8395 AF546), Alexa Fluor® 594 (sc-8395 AF594) or Alexa Fluor® 647 (sc-8395 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8395 AF680) or Alexa Fluor® 790 (sc-8395 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-8395 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Cdc2 p34 (B-6) 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) 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.

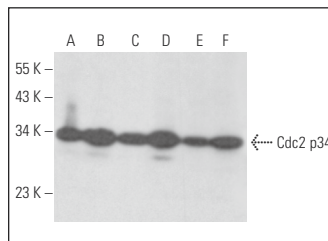
Molecular Weight of Cdc2 p34: 34 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, Hep G2 cell lysate: sc-2227 or MCF7 whole cell lysate: sc-2206.

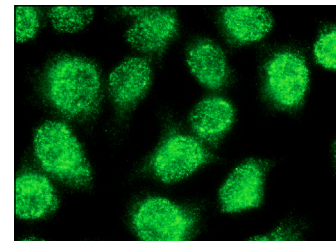
STORAGE

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

DATA



Cdc2 p34 (B-6): sc-8395. Western blot analysis of Cdc2 p34 expression in NAMALWA (A), HL-60 (B), MCF7 (C), BJAB (D), IB4 (E) and Hep G2 (F) whole cell lysates.



Cdc2 p34 (B-6): sc-8395. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Tseng, C., et al. 2002. Microtubule damaging agents induce apoptosis in HL-60 cells and G₂/M cell cycle arrest in HT 29 cells. *Toxicology* 175: 123-142.
2. Zheng, H.C., et al. 2017. The suppressing effects of BTG3 expression on aggressive behaviors and phenotypes of colorectal cancer: an *in vitro* and *in vivo* study. *Oncotarget* 8: 18322-18336.
3. Zhang, C., et al. 2018. The novel 19q13 KRAB zinc-finger tumour suppressor ZNF382 is frequently methylated in oesophageal squamous cell carcinoma and antagonises Wnt/β-catenin signalling. *Cell Death Dis.* 9: 573.
4. D'Ambola, M., et al. 2019. Fusicoccane diterpenes from *Hypoestes forsskaolii* as heat shock protein 90 (Hsp90) modulators. *J. Nat. Prod.* 82: 539-549.
5. Haneke, K., et al. 2020. CDK1 couples proliferation with protein synthesis. *J. Cell Biol.* 219: e201906147.
6. Fiengo, L., et al. 2021. The plant diterpene epoxysiderol targets Hsp70 in cancer cells, affecting its ATPase activity and reducing its translocation to plasma membrane. *Int. J. Biol. Macromol.* 189: 262-270.
7. Kwak, A.W., et al. 2022. Isolinderalactone sensitizes oxaliplatin-resistance colorectal cancer cells through JNK/p38 MAPK signaling pathways. *Phytomedicine* 105: 154383.
8. Guan, S., et al. 2023. Knockdown of RFC4 inhibits the cell proliferation of nasopharyngeal carcinoma *in vitro* and *in vivo*. *Front. Med.* 17: 132-142.

RESEARCH USE

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

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