

Cdc2 p34 (F-5): sc-166885

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 de-pendent kinases have been identified. These include Cdk3-Cdk8, PCTAIRE-1-3 and KKIALLRE.

CHROMOSOMAL LOCATION

Genetic locus: CDK1 (human) mapping to 10q21.2; Cdk2 (mouse) mapping to 10 D3.

SOURCE

Cdc2 p34 (F-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 40-60 within the conserved PSTAIRE domain of Cdc2 p34 of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-166885 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

Cdc2 p34 (F-5) is recommended for detection of Cdc2 p34 and other kinases containing the PSTAIRE and PFTAIRE motifs of mouse, rat, human and chicken origin by Western Blotting (starting dilution 1:100, 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).

Cdc2 p34 (F-5) is also recommended for detection of Cdc2 p34 and other kinases containing the PSTAIRE and PFTAIRE motifs in additional species, including equine, canine, bovine, porcine and avian.

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.

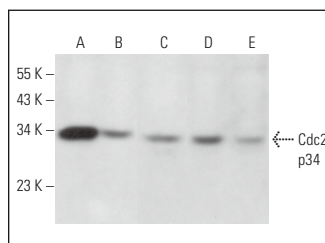
Molecular Weight of Cdc2 p34: 34 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, MEG-01 cell lysate: sc-2283 or Neuro-2A whole cell lysate: sc-364185.

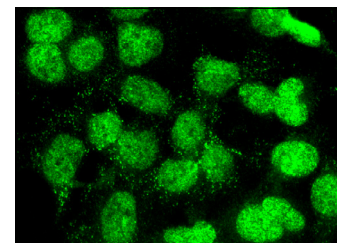
RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Cdc2 p34 (F-5): sc-166885. Western blot analysis of Cdc2 p34 expression in WEHI-231 (A), K-562 (B), MEG-01 (C), F9 (D) and Neuro-2A (E) whole cell lysates.



Cdc2 p34 (F-5): sc-166885. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Yeh, C.N., et al. 2013. Reappraisal of the therapeutic role of celecoxib in cholangiocarcinoma. *PLoS ONE* 8: e69928.
- Oqani, R.K., et al. 2016. P-TEFb kinase activity is essential for global transcription, resumption of meiosis and embryonic genome activation in pig. *PLoS ONE* 11: e0152254.
- Oqani, R.K., et al. 2017. Effects of CDK inhibitors on the maturation, transcription, and MPF activity of porcine oocytes. *Reprod. Biol.* 17: 320-326.
- Zhang, Y., et al. 2022. SV40T/E6E7-induced proliferation is involved in the activity of E2F3 in bovine mammary epithelial cells. *Animals* 12: 1790.
- Mosesso, N., et al. 2024. Arabidopsis CaLB1 undergoes phase separation with the ESCRT protein ALIX and modulates autophagosome maturation. *Nat. Commun.* 15: 5188.

STORAGE

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



See **Cdc2 p34 (17): sc-54** for Cdc2 p34 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.