

cyclin F (N-20): sc-953

BACKGROUND

Cyclins are the regulatory subunits of Cdc2 p34 and related cyclin dependent kinases (Cdks) which play critical roles in the control of cell cycle progression. The catalytic subunit for cyclin A and B is Cdc2 p34 kinase. The Cdc2-cyclin B complex controls the G₂ to M transition whereas Cdc2-cyclin A regulates S phase progression. The G₁ to S transition, however, appears to be controlled by the G₁ cyclins. Cyclin D1 accumulates during G₁ and associates with Cdk2, Cdk4 and Cdk5. Cyclin E and Cdk2 interact during the G₁ to S transition. Cyclin F is the largest of the cyclins described to date, migrating as a 100-110 kDa protein. It contains an extensive PEST-rich C-terminus and a cyclin box region that is most related to cyclins A and B. Cyclin F is ubiquitously expressed in human cells but fluctuates dramatically through the cell cycle, peaking in G₂ like cyclin A and decreasing prior to decline of cyclin B. Cyclin F exhibits regulated subcellular localization, being localized in the nucleus in most cells, with a significant percentage of cells showing only perinuclear staining.

REFERENCES

1. Pines, J., et al. 1990. Human cyclin A is adenovirus E1A-associated protein p60 and behaves differently from cyclin B. *Nature* 346: 760-763.
2. Fang, F., et al. 1991. Evidence that the G₁-S and G₂-M transitions are controlled by different Cdc2 proteins in higher eukaryotes. *Cell* 66: 731-742.
3. Koff, A., et al. 1991. Human cyclin E, a new cyclin that interacts with two members of the Cdc2 gene family. *Cell* 66: 1217-1228.
4. Girard, F., et al. 1991. Cyclin A is required for the onset of DNA replication in mammalian fibroblasts. *Cell* 67: 1169-1179.
5. Matsushime, H., et al. 1992. Identification and properties of an atypical catalytic subunit (p34PSK-J3/Cdk4) for mammalian D type G₁ cyclins. *Cell* 71: 323-334.
6. Xiong, Y., et al. 1992. D type cyclins associate with multiple protein kinases and the DNA replication and repair factor PCNA. *Cell* 71: 505-514.

CHROMOSOMAL LOCATION

Genetic locus: CCNF (human) mapping to 16p13.3; Ccnf (mouse) mapping to 17 A3.3.

SOURCE

cyclin F (N-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of cyclin F 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-953 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

cyclin F (N-20) is recommended for detection of cyclin F of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

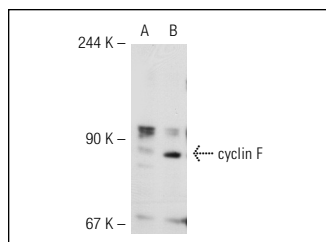
cyclin F (N-20) is also recommended for detection of cyclin F in additional species, including equine and canine.

Suitable for use as control antibody for cyclin F siRNA (h): sc-35138, cyclin F siRNA (m): sc-37596, cyclin F shRNA Plasmid (h): sc-35138-SH, cyclin F shRNA Plasmid (m): sc-37596-SH, cyclin F shRNA (h) Lentiviral Particles: sc-35138-V and cyclin F shRNA (m) Lentiviral Particles: sc-37596-V.

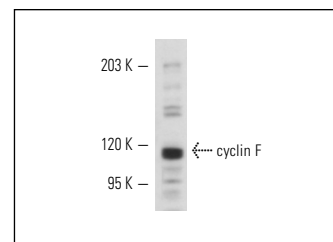
Molecular Weight of cyclin F: 110 kDa.

Positive Controls: cyclin F (m): 293T Lysate: sc-119547, A-431 whole cell lysate: sc-2201 or Ramos nuclear extract: sc-2153.

DATA



cyclin F (N-20): sc-953. Western blot analysis of cyclin F expression in non-transfected: sc-117752 (A) and mouse cyclin F transfected: sc-119547 (B) 293T whole cell lysates.



cyclin F (N-20): sc-953. Western blot analysis of cyclin F expression in Ramos nuclear extract.

SELECT PRODUCT CITATIONS

1. Kozar, K., et al. 2004. Mouse development and cell proliferation in the absence of D-cyclins. *Cell* 118: 477-91.
2. Huang, W., et al. 2007. GSK-3β mediates suppression of cyclin D2 expression by tumor suppressor PTEN. *Oncogene* 26: 2471-2482.

STORAGE

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

MONOS
Satisfaction
Guaranteed

Try **cyclin F (B-6): sc-515207** or **cyclin F (2123D1a): sc-81242**, our highly recommended monoclonal alternatives to cyclin F (N-20).