

cyclin F (B-6): sc-515207

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 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. 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.

CHROMOSOMAL LOCATION

Genetic locus: CCNF (human) mapping to 16p13.3.

SOURCE

cyclin F (B-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 774-798 at the C-terminus of cyclin F of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

cyclin F (B-6) is available conjugated to agarose (sc-515207 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515207 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515207 PE), fluorescein (sc-515207 FITC), Alexa Fluor® 488 (sc-515207 AF488), Alexa Fluor® 546 (sc-515207 AF546), Alexa Fluor® 594 (sc-515207 AF594) or Alexa Fluor® 647 (sc-515207 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515207 AF680) or Alexa Fluor® 790 (sc-515207 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515207 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

cyclin F (B-6) is recommended for detection of cyclin F of human 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).

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

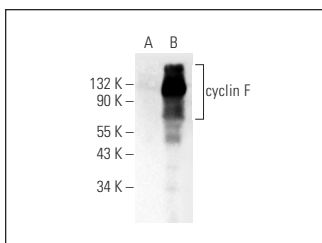
Molecular Weight of cyclin F: 110 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or human cyclin F transfected 293T whole cell lysate.

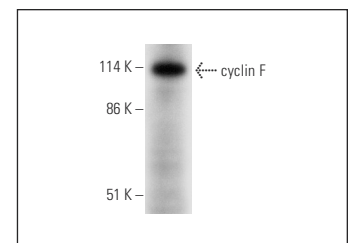
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (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 BPFITC: sc-516140 or m-IgGκ BPE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



cyclin F (B-6): sc-515207. Western blot analysis of cyclin F expression in non-transfected (A) and human cyclin F transfected (B) 293T whole cell lysates.



cyclin F (B-6): sc-515207. Western blot analysis of cyclin F expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Krajewski, A., et al. 2020. Cyclin F is involved in response to cisplatin treatment in melanoma cell lines. *Oncol. Rep.* 43: 765-772.
2. Krajewski, A., et al. 2020. Cyclin F downregulation affects epithelial-mesenchymal transition increasing proliferation and migration of the A-375 melanoma cell line. *Cancer Manag. Res.* 12: 13085-13097.

STORAGE

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