SANTA CRUZ BIOTECHNOLOGY, INC.

cyclin F (m): 293T Lysate: sc-119547

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 G_2 to M transition whereas Cdc2-cyclin A regulates S phase progression. The G_1 to S transition, however, appears to be controlled by the G_1 cyclins. Cyclin D1 accumulates during G_1 and associates with Cdk2, Cdk4 and Cdk5. Cyclin E and Cdk2 interact during the G_1 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 G_2 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. Girard, F., et al. 1991. Cyclin A is required for the onset of DNA replication in mammalian fibroblasts. Cell 67: 1169-1179.
3. Fang, F., et al. 1991. Evidence that the G_1-S and G_2-M transitions are controlled by different Cdc2 proteins in higher eukaryotes. Cell 66: 731-742.
4. 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.
5. Matsushime, H., et al. 1992. Identification and properties of an atypical catalytic subunit (p34PSK-J3/Cdk4) for mammalian D type G_1 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.
7. Tamura, K., et al. 1993. Cyclin G: a new mammalian cyclin with homology to fission yeast Cig1. Oncogene 8: 2113-2118.
8. Bai, C., et al. 1994. Human cyclin F. EMBO J. 13: 6087-6098.
9. Tetzlaff, M.T., et al. 2004. Cyclin F disruption compromises placental development and affects normal cell cycle execution. Mol. Cell. Biol. 24: 2487-2498.

CHROMOSOMAL LOCATION

Genetic locus: Ccnf (mouse) mapping to 17 A3.3.

PRODUCT

cyclin F (m): 293T Lysate represents a lysate of mouse cyclin F transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

cyclin F (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive cyclin F antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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

PROTOCOLS

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