p55 CDC (m): 293T Lysate: sc-125767



The Power to Questio

BACKGROUND

Cyclins, regulatory subunits which associate with kinases, control many of the important steps in cell cycle progression. The Cdc2 protein kinase (p34Cdc2) exhibits protein kinase activity *in vitro* and exists in a complex with both cyclin B and a protein homologous to p13suc 1. Cdc2 kinase is the active subunit of the M phase promoting factor (MPF) and the M phase-specific Histone H1 kinase. The p34Cdc2/cyclin B complex is required for the $\rm G_2$ to M transition. An additional cell cycle-dependent protein kinase termed p55 CDC exhibits a high degree of homology with the *S. cerevisiae* proteins Cdc20 and Cdc4. The p55 CDC transcript is readily detectable in a variety of cultured cell lines in growth phase, but disappears when cell growth is chemically arrested. p55 CDC shows kinase activity towards α -casein and myelin basic protein.

REFERENCES

- Brizuela, L., et al. 1987. p13suc 1 acts in the fission yeast cell division cycle as a component of the p34Cdc2 protein kinase. EMBO J. 6: 3507-3514.
- 2. Arion, D., et al. 1988. Cdc2 is a component of the M phase-specific Histone H1 kinase: evidence for identity with MPF. Cell 55: 371-378.
- Dunphy, W.G., et al. 1988. The Xenopus Cdc2 protein is a component of MPF, a cytoplasmic regulator of mitosis. Cell 54: 423-431.
- Morla, A.O., et al. 1989. Reversible tyrosine phosphorylation of Cdc2: dephosphorylation accompanies activation during entry into mitosis. Cell 58: 193-203.
- Pines, J., et al. 1989. Isolation of a human cyclin cDNA: evidence for cyclin mRNA and protein regulation in the cell cycle and for interaction with p34Cdc2. Cell 58: 833-846.
- 6. Jessus, C., et al. 1992. Oscillation of MPF is accompanied by periodic association between Cdc25 and Cdc2-cyclin B. Cell 68: 323-332.
- 7. Weinstein, J., et al. 1994. A novel mammalian protein, p55 CDC, present in dividing cells, is associated with protein kinase activity and has homology to the *Saccharomyces cerevisiae* cell division cycle proteins Cdc20 and Cdc4. Mol. Cell. Biol. 14: 3350-3363.
- Ohtoshi, A., et al. 2000. Human p55 (CDC)/Cdc20 associates with cyclin A and is phosphorylated by the cyclin A-Cdk2 complex. Biochem. Biophys. Res. Commun. 268: 530-534.
- 9. Conway, A.M., et al. 2007. Regulation of neuronal Cdc20 (p55 CDC) expression by the plasticity-related transcription factor zif268. Synapse 61: 463-468.

CHROMOSOMAL LOCATION

Genetic locus: Cdc20 (mouse) mapping to 4 D2.1.

PRODUCT

p55 CDC (m): 293T Lysate represents a lysate of mouse p55 CDC transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

p55 CDC (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive p55 CDC 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.

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.

PROTOCOLS

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

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com