cyclin D3 (1-292): sc-4076 WB



The Power to Question

BACKGROUND

The proliferation of eukaryotic cells is controlled at specific points in the cell cycle, particularly at the G1 to S and the G2 to M transitions. It is well established that the Cdc2 p34-cyclin B protein kinase plays a critical role in the G2 to M transition while cyclin A associates with Cdk2 p33 and functions in S phase. Considerable effort directed towards the identification of G1 cyclins has led to the isolation of cyclin D, cyclin C and cyclinE. Of these, cyclin D corresponds to a putative human oncogene designated PRAD1 which maps at the site of the Bcl-1 rearrangement in certain lymphomas and leukemias. Two additional human type D cyclins, as well as their mouse homologs, have been identified. Evidence has established that members of the cyclin D family react differentially with the retinoblastoma gene product.

REFERENCES

- 1. Draetta, G. 1990. Cell cycle control in eukaryotes: molecular mechanisms of Cdc2 activation. Trends Biochem. Sci. 15: 378-383.
- Xiong, Y., Connolly, T., Futcher, B., and Beach, D. 1991. Human D-type cyclin. Cell 65: 691-699.
- Kiyokawa, H., Busquets, X., Powell, C.T., Ngo, L., Rifkind, R.A., and Marks, P.A. 1992. Cloning of a D-type cyclin from murine erythroleukemia cells. Proc. Natl. Acad. Sci. USA 89: 2444-2447.
- Won, K., Xiong, Y., Beach, D., and Gilman, M.Z. 1992. Growth-regulated expression of D-type cyclin genes in human diploid fibroblasts. Proc. Natl. Acad. Sci. USA 89: 9910-9914.
- Motokura, T., Keyomarsi, K., Kronenberg, H.M., and Arnold, A. 1992. Cloning and characterization of human cyclin D3, a cDNA closely related in sequence to the PRAD1/cyclin D1 proto-oncogene. J. Biol. Chem. 267: 20412-20415.
- Inaba, T., Matsushime, H., Valentine, M., Roussel, M.F., Sherr, C.J., and Look, A.T. 1992. Genomic organization, chromosomal localization, and independent expression of human cyclin D genes. Genomics 13: 565-574.
- 7. Xiong, Y., Menninger, J., Beach, D., and Ward, D.C. 1992. Molecular cloning and chromosomal mapping of CCND genes encoding human D-type cyclins. Genomics 13: 575-584.
- 8. Ewen, M.E., Sluss, H.K., Sherr, C.J., Matsushime, H., Kato, J., and Livingston, D.M. 1993. Functional interactions of the retinoblastoma protein with mammalian D-type cyclins. Cell 73: 487-497.
- 9. Dowdy, S.F., Hinds, P.W., Louie, K., Reed, S.I., Arnold, A., and Weinberg, R.A. 1993. Physical interaction of the retinoblastoma protein with human D cyclins. Cell 73: 499-511.

SOURCE

cyclin D3 (1-292) is expressed in *E. coli* as a 59 kDa tagged fusion protein corresponding to amino acids 1-292 representing full length cyclin D3 protein of human origin.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

PRODUCT

cyclin D3 (1-292) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 μ g protein in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

cyclin D3 (1-292) is suitable as a Western blotting control for sc-182, sc-453, sc-755 and sc-6283.

RESEARCH USE

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

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