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cyclin D1 (1-295): sc-4074 WB

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 cyclin E. 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

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5. Motokura, T.K., et al. 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.
6. Inaba, T., et al. 1992. Genomic organization, chromosomal localization, and independent expression of human cyclin D genes. *Genomics* 13: 565-574.
7. Xiong, Y., et al. 1992. Molecular cloning and chromosomal mapping of CCND genes encoding human D-type cyclins. *Genomics* 13: 575-584.
8. Ewen, M.E., et al. 1993. Functional interactions of the retinoblastoma protein with mammalian D-type cyclins. *Cell* 73: 487-497.
9. Dowdy, S.F., et al. 1993. Physical interaction of the retinoblastoma protein with human D cyclins. *Cell* 73: 499-511.

SOURCE

cyclin D1 (1-295) is expressed in *E. coli* as a 61 kDa tagged fusion protein corresponding to amino acids 1-295 representing full length cyclin D1 protein of human origin.

PRODUCT

cyclin D1 (1-295) is purified from bacterial lysates (> 98%) by glutathione agarose affinity chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

cyclin D1 (1-295) is suitable as a Western blotting control for sc-246, sc-718, sc-753 and sc-8396.

SELECT PRODUCT CITATIONS

1. Jiang, L., et al. 2017. TrkB promotes laryngeal cancer metastasis via activation PI3K/Akt pathway. *Oncotarget* 8: 108726-108737.
2. Ji, Z.P., et al. 2018. Transcription activated p73-modulated cyclin D1 expression leads to doxorubicin resistance in gastric cancer. *Exp. Ther. Med.* 15: 1831-1838.
3. Ren, Z., et al. 2019. MiR-421 promotes the development of osteosarcoma by regulating MCPIP1 expression. *Cancer Biol. Ther.* 12: 1-10.
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PROTOCOLS

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