

cyclin D3 (m): 293T Lysate: sc-119546

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. 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 function to regulate phosphorylation of the retinoblastoma gene product, thereby activating E2F transcription factors.

REFERENCES

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2. Xiong, Y., et al. 1991. Human D-type cyclin. *Cell* 65: 691-699.
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4. Kiyokawa, H., et al. 1992. Cloning of a D-type cyclin from murine erythroleukemia cells. *Proc. Natl. Acad. Sci. USA* 89: 2444-2447.
5. Won, K., et al. 1992. Growth-regulated expression of D-type cyclin genes in human diploid fibroblasts. *Proc. Natl. Acad. Sci. USA* 89: 9910-9914.
6. Motokura, T., 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.
7. Inaba, T., et al. 1992. Genomic organization, chromosomal localization, and independent expression of human cyclin D genes. *Genomics* 13: 565-574.
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.

CHROMOSOMAL LOCATION

Genetic locus: Ccnd3 (mouse) mapping to 17 C.

PRODUCT

cyclin D3 (m): 293T Lysate represents a lysate of mouse cyclin D3 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.

PROTOCOLS

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

APPLICATIONS

cyclin D3 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive cyclin D3 antibodies. Recommended use: 10-20 µl per lane.

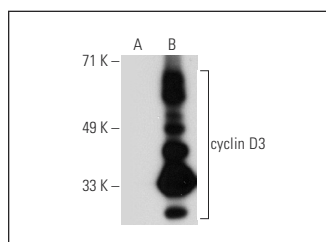
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

cyclin D3 (D-7): sc-6283 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse cyclin D3 expression in cyclin D3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

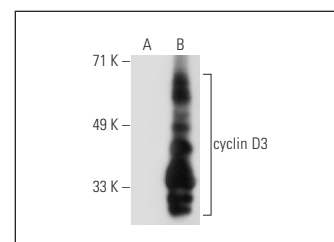
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (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.

DATA



cyclin D3 (D-7): sc-6283. Western blot analysis of cyclin D3 expression in non-transfected: sc-117752 (A) and mouse cyclin D3 transfected: sc-119546 (B) 293T whole cell lysates.



cyclin D3 (DCS-22): sc-56307. Western blot analysis of cyclin D3 expression in non-transfected: sc-117752 (A) and mouse cyclin D3 transfected: sc-119546 (B) 293T whole cell lysates.

RESEARCH USE

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