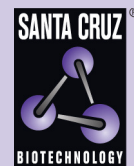


cyclin D2 (C-17): sc-181



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

CHROMOSOMAL LOCATION

Genetic locus: CCND2 (human) mapping to 12p13.32, CCND1 (human) mapping to 11q13.3; Ccnd2 (mouse) mapping to 6 F3, Ccnd1 (mouse) mapping to 7 F5.

SOURCE

cyclin D2 (C-17) is available as either rabbit (sc-181) or goat (sc-181-G) affinity purified polyclonal antibody raised against a peptide mapping at the C-terminus of cyclin D2 of human origin.

PRODUCT

Each vial contains either 100 µg (sc-181) or 200 µg (sc-181-G) IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-181 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

cyclin D2 (C-17) is recommended for detection of cyclin D2 and, to a lesser extent cyclin D1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

cyclin D2 (C-17) is also recommended for detection of cyclin D2 and, to a lesser extent cyclin D1 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of cyclin D2: 34 kDa.

Positive Controls: MM-142 nuclear extract: sc-2139 or cyclin D2 (h): 293T Lysate: sc-111616.

RESEARCH USE

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

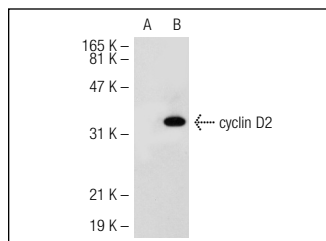
PROTOCOLS

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

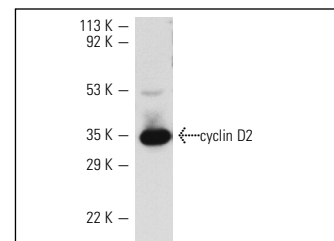
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



cyclin D2 (C-17)-G: sc-181-G. Western blot analysis of cyclin D2 expression in non-transfected: sc-117752 (A) and human cyclin D2 transfected: sc-111616 (B) 293T whole cell lysates.



cyclin D2 (C-17): sc-181. Western blot analysis of cyclin D2 expression in MM-142 nuclear extract.

SELECT PRODUCT CITATIONS

1. Fang, F., et al. 1996. Dependence of cyclin E-Cdk2 kinase activity on cell anchorage. *Science* 271: 499-502.
2. Mao, X., et al. 2011. A small-molecule inhibitor of D-cyclin transactivation displays preclinical efficacy in myeloma and leukemia via phosphoinositide 3-kinase pathway. *Blood* 117: 1986-1997.
3. Zhu, H., et al. 2011. EGFR signals downregulate tumor suppressors miR-143 and miR-145 in Western diet-promoted murine colon cancer: role of G₁ regulators. *Mol. Cancer Res.* 9: 960-975.
4. Petty, W.J., et al. 2011. High cyclin D3 expression confers erlotinib resistance in aerodigestive tract cancer. *Lung Cancer* 74: 384-391.
5. Lomonosov, M., et al. 2011. Expression of Fbxo7 in haematopoietic progenitor cells cooperates with p53 loss to promote lymphomagenesis. *PLoS ONE* 6: e21165.
6. Kuo, SH., et al. 2012. Expression of BCL10 in cervical cancer has a role in the regulation of cell growth through the activation of NF- κ B-dependent cyclin D1 signaling. *Gynecol. Oncol.* 126: 245-251.
7. Bai, M., et al. 2013. Immunohistological analysis of cell cycle and apoptosis regulators in thymus. *Ann. Anat.* 195: 159-165.
8. Khan, S., et al. 2015. Centchroman altered the expressions of tumor-related genes through active chromatin modifications in mammary cancer. *Mol. Carcinog.* E-published.



Try **cyclin D2 (B-6): sc-376676** or **cyclin D2 (DCS-3): sc-56305**, our highly recommended monoclonal alternatives to cyclin D2 (C-17). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see cyclin **D2 (B-6): sc-376676**.