SANTA CRUZ BIOTECHNOLOGY, INC.

cyclin D2 (H-289): sc-754

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The proliferation of eukaryotic cells is controlled at specific points in the cell cycle, particularly at the G_1 to S and the G_2 to M transitions. It is well established that the Cdc2 p34-cyclin B protein kinase plays a critical role in the G_2 to M transition while cyclin A associates with Cdk2 p33 and functions in S phase. Considerable effort directed towards the identification of G_1 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 Bcl1 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; Ccnd2 (mouse) mapping to 6 F3.

SOURCE

cyclin D2 (H-289) is a rabbit polyclonal antibody raised against amino acids 1-289 representing full length cyclin D2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

cyclin D2 (H-289) is recommended for detection of cyclin D2 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with cyclin D1 and cyclin D3.

cyclin D2 (H-289) is also recommended for detection of cyclin D2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for cyclin D2 siRNA (h): sc-35134, cyclin D2 siRNA (m): sc-35135, cyclin D2 shRNA Plasmid (h): sc-35134-SH, cyclin D2 shRNA Plasmid (m): sc-35135-SH, cyclin D2 shRNA (h) Lentiviral Particles: sc-35134-V and cyclin D2 shRNA (m) Lentiviral Particles: sc-35135-V.

Molecular Weight of cyclin D2: 34 kDa.

Positive Controls: MM-142 nuclear extract: sc-2139.

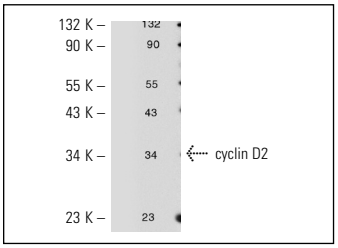
STORAGE

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

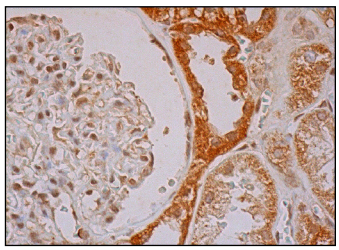
RESEARCH USE

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

DATA



cyclin D2 (H-289): sc-754. Western blot analysis of cyclin D2 expression in MM-142 nuclear extract.



cyclin D2 (H-289): sc-754. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing nuclear staining of cells in glomeruli and cytoplasmic and nuclear staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Wilson, B.A., et al. 2000. Differential modulation and subsequent blockade of mitogenic signaling and cell cycle progression by *Pasteurella multocida* toxin. Infect. Immun. 68: 4531-4538.
2. Escandell, J.M., et al. 2007. Dihydrocucurbitacin B inhibits delayed type hypersensitivity reactions by suppressing lymphocyte proliferation. J. Pharmacol. Exp. 322: 1261-1268.
3. Cannon, J.D., et al. 2007. Granulosa cell expression of G_1/S phase cyclins and cyclin-dependent kinases in PMSG-induced follicle growth. Mol. Cell. Endocrinol. 264: 6-15.
4. Wang, J., et al. 2008. c-Myc is required for maintenance of glioma cancer stem cells. PLoS ONE 3: e3769.
5. Pearson, H.B., et al. 2009. K-ras and Wnt signaling synergize to accelerate prostate tumorigenesis in the mouse. Cancer Res. 69: 94-101.
6. Shahi, M.H., et al. 2010. Regulation of sonic hedgehog-GLI1 downstream target genes PTCH1, Cyclin D2, Plakoglobin, PAX6 and NKX2.2 and their epigenetic status in medulloblastoma and astrocytoma. BMC Cancer 10: 614.
7. Shahi, M.H., et al. 2011. Expression and epigenetic modulation of sonic hedgehog-GLI1 pathway genes in neuroblastoma cell lines and tumors. Tumour Biol. 32: 113-127.
8. Leone, V., et al. 2011. A TSH-CREB1-microRNA loop is required for thyroid cell growth. Mol. Endocrinol. 25: 1819-1830.
9. Pawlikowski, J.S., et al. 2013. Wnt signaling potentiates nevogenesis. Proc. Natl. Acad. Sci. USA 110: 16009-16014.