

# cyclin D2 (B-6): sc-376676

## BACKGROUND

The proliferation of eukaryotic cells is controlled at specific points in the cell cycle, particularly at the G<sub>1</sub> to S and the G<sub>2</sub> to M transitions. It is well established that the Cdc2 p34-cyclin B protein kinase plays a critical role in the G<sub>2</sub> to M transition while cyclin A associates with Cdk2 p33 and functions in S phase. Considerable effort directed towards the identification of G<sub>1</sub> 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; Ccnd2 (mouse) mapping to 6 F3.

## SOURCE

cyclin D2 (B-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 261-289 at the C-terminus of cyclin D2 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-376676 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

cyclin D2 (B-6) is recommended for detection of cyclin D2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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: Caki-1 cell lysate: sc-2224, KNRK whole cell lysate: sc-2214 or MM-142 nuclear extract: sc-2139.

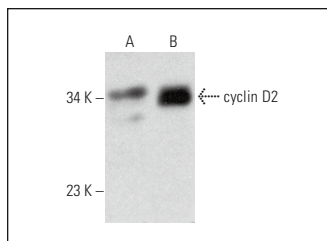
## STORAGE

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

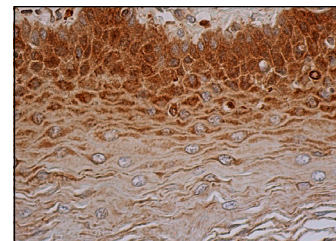
## RESEARCH USE

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

## DATA



cyclin D2 (B-6): sc-376676. Western blot analysis of cyclin D2 expression in Caki-1 (A) and KNRK (B) whole cell lysates.



cyclin D2 (B-6): sc-376676. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing nuclear and cytoplasmic staining of squamous epithelial cells.

## SELECT PRODUCT CITATIONS

1. Xi, Y., et al. 2015. Induction of Bcl2-interacting killer, BIK, is mediated for anti-cancer activity of curcumin in human head and neck squamous cell carcinoma cells. *J. Cancer* 6: 327-332.
2. Setijono, S.R., et al. 2018. MiR-218 and miR-129 regulate breast cancer progression by targeting lamins. *Biochem. Biophys. Res. Commun.* 496: 826-833.
3. Biamonte, F., et al. 2019. MicroRNA let-7g acts as tumor suppressor and predictive biomarker for chemoresistance in human epithelial ovarian cancer. *Sci. Rep.* 9: 5668.
4. Mazaré, N., et al. 2020. Local translation in perisynaptic astrocytic processes is specific and changes after fear conditioning. *Cell Rep.* 32: 108076.
5. Zhou, J., et al. 2021. MiR-206 serves an important role in polycystic ovary syndrome through modulating ovarian granulosa cell proliferation and apoptosis. *Exp. Ther. Med.* 21: 179.
6. Song, L., et al. 2021. Extracellular vesicles from neurons promote neural induction of stem cells through cyclin D1. *J. Cell Biol.* 220: e202101075.
7. Pang, Y., et al. 2023. TCF12 deficiency impairs the proliferation of glioblastoma tumor cells and improves survival. *Cancers* 15: 2033.
8. Shrestha, R.L., et al. 2023. The Histone H3/H4 chaperone CHAF1B prevents the mislocalization of CENP-A for chromosomal stability. *J. Cell Sci.* 136: jcs260944.
9. Zhang, Q.Y., et al. 2024. Inulin alleviates GenX-induced intestinal injury in mice by modulating the MAPK pathway, cell cycle, and cell adhesion proteins. *Environ. Pollut.* 362: 124974.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.