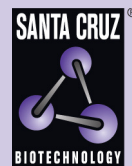


cyclin C (T-19): sc-1061



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. Cyclin D corresponds to a putative human oncogene designated PRAD1 which maps at the site of the BCL1 rearrangement in certain lymphomas and leukemias. Cyclin C complexes with the cyclin dependent kinase Cdk8. The cyclin C/Cdk8 complex has been shown to have kinase activity toward the carboxy-terminal domain of RNA polymerase II. Two complexes have been identified which contain cyclin C/Cdk8.

REFERENCES

1. Draetta, G. 1990. Cell cycle control in eukaryotes: molecular mechanisms of Cdc2 activation. *Trends Biol. Sci.* 15: 378-383.
2. Xiong, Y., et al. 1991. Human D-type cyclin. *Cell* 65: 691-699.

CHROMOSOMAL LOCATION

Genetic locus: CCNC (human) mapping to 6q16.2; Ccnc (mouse) mapping to 4 A3.

SOURCE

cyclin C (T-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of cyclin C 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.

Blocking peptide available for competition studies, sc-1061 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

cyclin C (T-19) is recommended for detection of cyclin C 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).

cyclin C (T-19) is also recommended for detection of cyclin C in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for cyclin C siRNA (h): sc-35132, cyclin C siRNA (m): sc-35133, cyclin C shRNA Plasmid (h): sc-35132-SH, cyclin C shRNA Plasmid (m): sc-35133-SH, cyclin C shRNA (h) Lentiviral Particles: sc-35132-V and cyclin C shRNA (m) Lentiviral Particles: sc-35133-V.

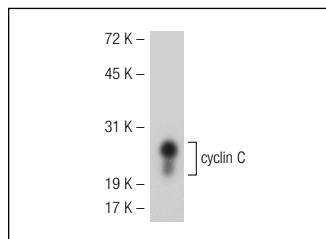
Molecular Weight of cyclin C: 35 kDa.

Positive Controls: A673 cell lysate: sc-2414 or rat skeletal muscle extract: sc-364810.

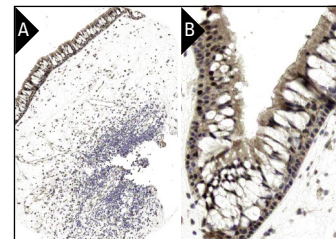
STORAGE

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

DATA



cyclin C (T-19): sc-1061. Western blot analysis of cyclin C expression in rat skeletal muscle tissue extract.



cyclin C (T-19): sc-1061. Immunoperoxidase staining of formalin fixed, paraffin-embedded human nasopharynx tissue showing nuclear and cytoplasmic staining of surface epithelial cells at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Eberhardy, S.R. and Farnham, P.J. 2001. c-Myc mediates activation of the CAD promoter via a post-RNA polymerase II recruitment mechanism. *J. Biol. Chem.* 276: 48562-48571.
2. Yik, J.H., et al. 2003. Inhibition of P-TEFb (Cdk9/Cyclin T) kinase and RNA polymerase II transcription by the coordinated actions of HEXIM1 and 7SK snRNA. *Mol. Cell* 12: 971-982.
3. Ren, S. 2004. cyclin C/Cdk3 promotes Rb-dependent G₀ exit. *Cell* 117: 239-251.
4. Tsutsui, T., et al. 2008. Human mediator kinase subunit CDK11 plays a negative role in viral activator VP16-dependent transcriptional regulation. *Genes Cells* 13: 817-826.
5. Knuesel, M.T., et al. 2009. The human Cdk8 subcomplex is a histone kinase that requires Med12 for activity and can function independently of mediator. *Mol. Cell. Biol.* 29: 650-661.
6. Miyata, Y., et al. 2010. Cyclin C regulates human hematopoietic stem/progenitor cell quiescence. *Stem Cells* 28: 308-317.
7. Lai, F., et al. 2013. Activating RNAs associate with mediator to enhance chromatin architecture and transcription. *Nature* 494: 497-501.

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.