

cyclin C (H-184): sc-5610

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.
3. Lew, D.J., et al. 1991. Isolation of three novel human cyclins by rescue of G₁ cyclin (Cln) function in yeast. *Cell* 66: 1197-1206.

CHROMOSOMAL LOCATION

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

SOURCE

cyclin C (H-184) is a rabbit polyclonal antibody raised against amino acids 120-303 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.

APPLICATIONS

cyclin C (H-184) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

cyclin C (H-184) 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.

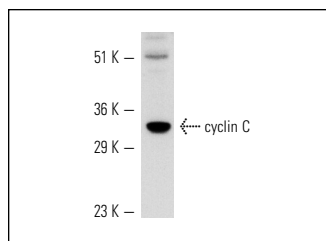
Molecular Weight of cyclin C: 35 kDa.

Positive Controls: A-673 cell lysate: sc-2414 or rat skeletal muscle extract: sc-364810.

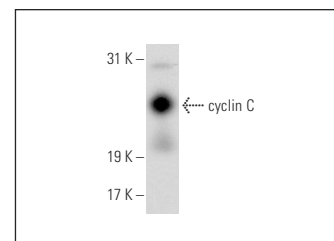
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



cyclin C (H-184): sc-5610. Western blot analysis of cyclin C expression in A-673 whole cell lysate.



cyclin C (H-184): sc-5610. Western blot analysis of cyclin C expression in rat skeletal muscle tissue extract.

SELECT PRODUCT CITATIONS

1. Nagl, N.G., et al. 2005. The p270 (ARID1A/SMARCF1) subunit of mammalian SWI/SNF-related complexes is essential for normal cell cycle arrest. *Cancer Res.* 65: 9236-9244.
2. Belakavadi, M., et al. 2008. MED1 phosphorylation promotes its association with mediator: implications for nuclear receptor signaling. *Mol. Cell Biol.* 28: 3932-3942.
3. Skirrow, R.C., et al. 2008. Roscovitine inhibits thyroid hormone-induced tail regression of the frog tadpole and reveals a role for cyclin C/Cdk8 in the establishment of the metamorphic gene expression program. *Dev. Dyn.* 237: 3787-3797.
4. Popov, V.M., et al. 2009. The cell fate determination factor DACH1 is expressed in estrogen receptor- α -positive breast cancer and represses estrogen receptor- α signaling. *Cancer Res.* 69: 5752-5760.
5. Ming, J., et al. 2011. Interleukin-7 up-regulates cyclin D1 via activator protein-1 to promote proliferation of cell in lung cancer. *Cancer Immunol. Immunother.* 61: 79-88.

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.