

# cyclin YL1 (D-4): sc-514637

## BACKGROUND

Cell proliferation is controlled at specific stages of the cell cycle by distinct protein kinase complexes. These complexes consist of a catalytic subunit associating with a specific regulatory subunit to form the active kinase. The cyclins, which include cyclin A, B, C, D, E, F, G, H, I, K, L, T, Y and their related proteins, including Dbf4, comprise the regulatory subunits of these kinase complexes. The controlled activation of the kinase complexes at various intervals of the cell cycle is regulated by the availability of the cyclins to the catalytic subunit. Unlike the catalytic subunit, which is expressed continually, the expression and stability of the regulatory subunit fluctuates depending on the stage of the cell cycle, thereby regulating kinase activity. Cyclin YL1 (cyclin Y-like 1), also known as CCNYL1 359 amino acid protein that contains one cyclin N-terminal domain and belongs to the cyclin Y subfamily of the cyclin family. Cyclin YL1 exists as three alternatively spliced isoforms and is encoded by a gene located on human chromosome 2.

## REFERENCES

- Gallant, P. and Nigg, E.A. 1994. Identification of a novel vertebrate cyclin: cyclin B3 shares properties with both A- and B-type cyclins. *EMBO J.* 13: 595-605.
- Mikulits, W., et al. 1997. Dynamics of cell cycle regulators: artifact-free analysis by recultivation of cells synchronized by centrifugal elutriation. *DNA Cell Biol.* 16: 849-859.
- Kolonin, M.G. and Finley, R.L. 2000. A role for cyclin J in the rapid nuclear division cycles of early *Drosophila* embryogenesis. *Dev. Biol.* 227: 661-672.
- Kong, M., et al. 2000. Cyclin F regulates the nuclear localization of cyclin B1 through a cyclin-cyclin interaction. *EMBO J.* 19: 1378-1388.
- Malara, N.M., et al. 2006. Ageing, hormonal behaviour and cyclin D1 in ductal breast carcinomas. *Breast* 15: 81-89.
- Wikman, H. and Kettunen, E. 2006. Regulation of the G<sub>1</sub>/S phase of the cell cycle and alterations in the RB pathway in human lung cancer. *Expert Rev. Anticancer Ther.* 6: 515-530.
- Liu, D., et al. 2010. Cyclin Y is a novel conserved cyclin essential for development in *Drosophila*. *Genetics* 184: 1025-1035.

## CHROMOSOMAL LOCATION

Genetic locus: CCNYL1 (human) mapping to 2q33.3.

## SOURCE

cyclin YL1 (D-4) is a mouse monoclonal antibody raised against amino acids 3-51 mapping at the N-terminus of cyclin YL1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

cyclin YL1 (D-4) is recommended for detection of cyclin YL1 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for cyclin YL1 siRNA (h): sc-94474, cyclin YL1 shRNA Plasmid (h): sc-94474-SH and cyclin YL1 shRNA (h) Lentiviral Particles: sc-94474-V.

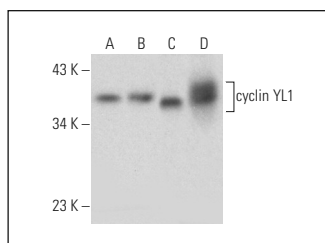
Molecular Weight of cyclin YL1: 41 kDa.

Positive Controls: human testis extract: sc-363781, Jurkat whole cell lysate: sc-2204 or WiDR cell lysate: sc-24779.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



cyclin YL1 (D-4): sc-514637. Western blot analysis of cyclin YL1 expression in WiDR (A) and Jurkat (B) whole cell lysates and human testis (C) and human cerebellum (D) tissue extracts.

## RESEARCH USE

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

## PROTOCOLS

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