

# cyclin YL2 siRNA (h): sc-90634

## 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 YL2, also known as CCNYL2, is a 361 amino acid protein belonging to the cyclin family and the cyclin Y subfamily. Cyclin YL2 contains one cyclin N-terminal domain and is encoded by a gene located on human chromosome 10p15.3.

## REFERENCES

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2. Mikulits, W., Dolznig, H., Edelmann, H., Sauer, T., Deiner, E.M., Ballou, L., Beug, H. and Müllner, E.W. 1997. Dynamics of cell cycle regulators: artifact-free analysis by recultivation of cells synchronized by centrifugal elutriation. *DNA Cell Biol.* 16: 849-859.
3. 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.
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6. 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.
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## CHROMOSOMAL LOCATION

Genetic locus: CCNYL2 (human) mapping to 10p15.3.

## 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) for detailed protocols and support products.

## PRODUCT

cyclin YL2 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see cyclin YL2 shRNA Plasmid (h): sc-90634-SH and cyclin YL2 shRNA (h) Lentiviral Particles: sc-90634-V as alternate gene silencing products.

For independent verification of cyclin YL2 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-90634A, sc-90634B and sc-90634C.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

cyclin YL2 siRNA (h) is recommended for the inhibition of cyclin YL2 expression in human cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10  $\mu$ M in 66  $\mu$ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor cyclin YL2 gene expression knockdown using RT-PCR Primer: cyclin YL2 (h)-PR: sc-90634-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.