



cyclin J siRNA (h): sc-90703

BACKGROUND

Cyclin J is a 372 amino acid protein encoded by the human gene CCNJ located on chromosome 10. Cyclin J belongs to the cyclin family and contains one cyclin N-terminal domain. A cyclin forms a complex with its partner cyclin-dependent kinase (Cdk), which activates the protein kinase function of the Cdk. Cyclins are so named because their concentration varies in a cyclical fashion during the cell cycle. They are produced or degraded as needed in order to drive the cell through the different stages of the cell cycle. When its concentrations in the cell are low, the cyclin detaches from the Cdk, inhibiting the activity of the enzyme, probably by causing a protein chain to block the enzymatic site. Cyclin J-associated kinase activity is required for the early embryonic division cycles.

REFERENCES

1. Bai, C., Richman, R. and Elledge, S.J. 1994. Human cyclin F. *EMBO J.* 13: 6087-6098.
2. Finley, R.L., Jr., Thomas, B.J., Zipursky, S.L. and Brent, R. 1996. Isolation of *Drosophila* cyclin D, a protein expressed in the morphogenetic furrow before entry into S phase. *Proc. Natl. Acad. Sci. USA* 93: 3011-3015.
3. Kong, M., Barnes, E.A., Ollendorff, V. and Donoghue, D.J. 2000. Cyclin F regulates the nuclear localization of cyclin B1 through a cyclin-cyclin interaction. *EMBO J.* 19: 1378-1388.
4. Kolonin, M.G. 2000. A role for cyclin J in the rapid nuclear division cycles of early *Drosophila* embryogenesis. *Dev. Biol.* 227: 661-672.
5. Fung, T.K. and Poon, R.Y. 2005. A roller coaster ride with the mitotic cyclins. *Semin. Cell Dev. Biol.* 16: 335-342.

CHROMOSOMAL LOCATION

Genetic locus: CCNJ (human) mapping to 10q24.1.

PRODUCT

cyclin J 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see cyclin J shRNA Plasmid (h): sc-90703-SH and cyclin J shRNA (h) Lentiviral Particles: sc-90703-V as alternate gene silencing products.

For independent verification of cyclin J (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-90703A, sc-90703B and sc-90703C.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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

APPLICATIONS

cyclin J siRNA (h) is recommended for the inhibition of cyclin J 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 μ M in 66 μ 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.

GENE EXPRESSION MONITORING

cyclin J (2126C1a): sc-81064 is recommended as a control antibody for monitoring of cyclin J gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor cyclin J gene expression knockdown using RT-PCR Primer: cyclin J (h)-PR: sc-90703-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.