

Cks1 siRNA (h): sc-29273

BACKGROUND

The Cdc2 p34-cyclin B complex plays a critical role in the cell cycle by regulating the G₂ to M transition. Also referred to as M-phase promoting factor or MPF, this complex is a required component of the cell cycle machinery and is necessary for cell entry into mitosis. The Cdc28 protein represents the *S. cerevisiae* counterpart of human Cdc2 p34 and has been found complexed to a regulatory protein, termed p13suc1, in addition to cyclin B. The human homolog of p13suc1 has been identified and designated Cks1 p9. Null mutations in the p13suc1 and Cks1 p9 genes result in the arrest of the cell cycle at either the G₁ or G₂ phase, suggesting that the proteins may also regulate the activity of cyclin dependent kinases that act at critical points early in the cell cycle.

REFERENCES

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2. Dunphy, W.G., et al. 1988. The *Xenopus* Cdc2 protein is a component of MPF, a cytoplasmic regulator of mitosis. *Cell* 54: 423-431.
3. Arion, D., et al. 1988. Cdc2 is a component of the M phase-specific Histone H1 kinase: evidence for identity with MPF. *Cell* 55: 371-378.
4. Morla, A.O., et al. 1989. Reversible tyrosine phosphorylation of Cdc2: dephosphorylation accompanies activation during entry into mitosis. *Cell* 58: 193-203.
5. Pines, J., et al. 1989. Isolation of a human cyclin cDNA: evidence for cyclin mRNA and protein regulation in the cell cycle and for interaction with p34^{Cdc2}. *Cell* 58: 833-846.
6. Jessus, C., et al. 1992. Oscillation of MPF is accompanied by periodic association between Cdc25 and Cdc2-cyclin B. *Cell* 68: 323-332.
7. Egan, E.A. and Solomon, M.J. 1998. Cyclin-stimulated binding of Cks proteins to cyclin-dependent kinases. *Mol. Cell. Biol.* 18: 3659-3667.
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CHROMOSOMAL LOCATION

Genetic locus: CKS1 (human) mapping to 1q21.3.

PRODUCT

Cks1 siRNA (h) is a pool of 4 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 Cks1 shRNA Plasmid (h): sc-29273-SH and Cks1 shRNA (h) Lentiviral Particles: sc-29273-V as alternate gene silencing products.

For independent verification of Cks1 (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-29273A, sc-29273B, sc-29273C and sc-29273D.

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

Cks1 siRNA (h) is recommended for the inhibition of Cks1 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

Cks1/2 (F-12): sc-376663 is recommended as a control antibody for monitoring of Cks1 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Cks1 gene expression knockdown using RT-PCR Primer: Cks1 (h)-PR: sc-29273-PR (20 μ l, 473 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

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.