

CDCP1 siRNA (h): sc-44640

BACKGROUND

CDCP1 (CUB-domain-containing protein 1) contains three extracellular CUB domains, a transmembrane domain, and two putative cytoplasmic tyrosine phosphorylation sites. Phosphorylation of the gp140 and p80 proteins is mediated by Src family kinases at various tyrosine residues, including Tyr 734. PTP family members mediate the desphosphorylation of CDCP1. The conversion of gp140 to p80 prolongs the phosphorylation state, which may affect signaling in epithelial wounds. CDCP1 acts as a marker for hematopoietic cells and also exhibits high expression in metastatic colon and breast tumors.

REFERENCES

1. Scherl-Mostageer, M., et al. 2001. Identification of a novel gene, CDCP1, overexpressed in human colorectal cancer. *Oncogene* 20: 4402-4408.
2. Conze, T., et al. 2003. CDCP1 is a novel marker for hematopoietic stem cells. *Ann. N.Y. Acad. Sci.* 996: 222-226.
3. Hooper, J.D., et al. 2003. Subtractive immunization using highly metastatic human tumor cells identifies SIMA135/CDCP1, a 135 kDa cell surface phosphorylated glycoprotein antigen. *Oncogene* 22: 1783-1794.
4. Brown, T.A., et al. 2004. Adhesion or plasmin regulates tyrosine phosphorylation of a novel membrane glycoprotein p80/gp140/CUB domain-containing protein 1 in epithelia. *J. Biol. Chem.* 279: 14772-14783.
5. Bühring, H.J., et al. 2004. CDCP1 identifies a broad spectrum of normal and malignant stem/progenitor cell subsets of hematopoietic and non-hematopoietic origin. *Stem Cells* 22: 334-343.
6. Benes, C.H., et al. 2005. The C2 domain of PKC δ is a phosphotyrosine binding domain. *Cell* 121: 271-280.

CHROMOSOMAL LOCATION

Genetic locus: CDCP1 (human) mapping to 3p21.31.

PRODUCT

CDCP1 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 CDCP1 shRNA Plasmid (h): sc-44640-SH and CDCP1 shRNA (h) Lentiviral Particles: sc-44640-V as alternate gene silencing products.

For independent verification of CDCP1 (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-44640A, sc-44640B and sc-44640C.

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

CDCP1 siRNA (h) is recommended for the inhibition of CDCP1 isoform 1 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

CDCP1 (D-1): sc-515545 is recommended as a control antibody for monitoring of CDCP1 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 CDCP1 gene expression knockdown using RT-PCR Primer: CDCP1 (h)-PR: sc-44640-PR (20 μ l, 516 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.