

SDF-2 siRNA (m): sc-153286

BACKGROUND

Secretory proteins, such as enzymes, hormones and toxins, are exported by the cell into either ducts (exocrine) or the bloodstream (endocrine). Once secreted, these proteins have a variety of functions within the cell and are involved in signaling pathways, immune responses and hormone regulation. SDF-2 (stromal cell-derived factor-2) is a 211 amino acid protein that contains three MIR domains. Expressed throughout the body, SDF-2 shares 92% sequence similarity with its mouse counterpart and is thought to function as a secretory protein. Due to the high similarity between SDF-2 and its corresponding mouse protein, SDF-2 may have a conserved function among mammals.

REFERENCES

1. Hamada, T., et al. 1996. Isolation and characterization of a novel secretory protein, stromal cell-derived factor-2 (SDF-2) using the signal sequence trap method. *Gene* 176: 211-214.
2. Wang, N., et al. 1999. SDF-2 induction of terminal differentiation in *Dictyostelium discoideum* is mediated by the membrane-spanning sensor kinase DhkA. *Mol. Cell. Biol.* 19: 4750-4756.
3. Fukuda, S., et al. 2001. Murine and human SDF2L1 is an endoplasmic reticulum stress-inducible gene and encodes a new member of the Pmt/rt protein family. *Biochem. Biophys. Res. Commun.* 280: 407-414.
4. Meunier, L., et al. 2002. A subset of chaperones and folding enzymes form multiprotein complexes in endoplasmic reticulum to bind nascent proteins. *Mol. Biol. Cell.* 13: 4456-4469.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602934. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Kinseth, M.A., et al. 2007. The Golgi-associated protein GRASP is required for unconventional protein secretion during development. *Cell* 130: 524-534.

CHROMOSOMAL LOCATION

Genetic locus: Sdf2 (mouse) mapping to 11 B5.

PRODUCT

SDF-2 siRNA (m) is a pool of 2 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 SDF-2 shRNA Plasmid (m): sc-153286-SH and SDF-2 shRNA (m) Lentiviral Particles: sc-153286-V as alternate gene silencing products.

For independent verification of SDF-2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-153286A and sc-153286B.

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

SDF-2 siRNA (m) is recommended for the inhibition of SDF-2 expression in mouse 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

SDF-2 (J-22): sc-100660 is recommended as a control antibody for monitoring of SDF-2 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 SDF-2 gene expression knockdown using RT-PCR Primer: SDF-2 (m)-PR: sc-153286-PR (20 μ l). 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.