

Slfn5 siRNA (m): sc-153590

BACKGROUND

Slfn5 (Schlafen family member 5) is an 891 amino acid protein that exists as multiple alternatively spliced isoforms and is thought to play a role in hematopoietic cell differentiation. The gene encoding Slfn5 maps to human chromosome 17q12, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

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- Geserick, P., et al. 2004. Modulation of T cell development and activation by novel members of the Schlafen (slfn) gene family harbouring an RNA helicase-like motif. *Int. Immunol.* 16: 1535-1548.
- Nusbaum, R., et al. 2006-2007. Susceptibility to breast cancer: hereditary syndromes and low penetrance genes. *Breast Dis.* 27: 21-50.
- Ropolo, A., et al. 2007. The pancreatitis-induced vacuole membrane protein 1 triggers autophagy in mammalian cells. *J. Biol. Chem.* 282: 37124-37133.
- Tai, Y.C., et al. 2007. Breast cancer risk among male BRCA1 and BRCA2 mutation carriers. *J. Natl. Cancer Inst.* 99: 1811-1814.
- Yan, J., et al. 2007. BLIMP1 regulates cell growth through repression of p53 transcription. *Proc. Natl. Acad. Sci. USA* 104: 1841-1846.

CHROMOSOMAL LOCATION

Genetic locus: Slfn5 (mouse) mapping to 11 C.

PRODUCT

Slfn5 siRNA (m) 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 Slfn5 shRNA Plasmid (m): sc-153590-SH and Slfn5 shRNA (m) Lentiviral Particles: sc-153590-V as alternate gene silencing products.

For independent verification of Slfn5 (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-153590A, sc-153590B and sc-153590C.

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

Slfn5 siRNA (m) is recommended for the inhibition of Slfn5 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Slfn5 gene expression knockdown using RT-PCR Primer: Slfn5 (m)-PR: sc-153590-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

- Mavrommatis, E., et al. 2013. Expression and regulatory effects of murine Schlafen (Slfn) genes in malignant melanoma and renal cell carcinoma. *J. Biol. Chem.* 288: 33006-33015.

RESEARCH USE

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