

ST5 siRNA (m): sc-153863

BACKGROUND

ST5 (suppression of tumorigenicity 5), also known as DENND2B (DENN domain-containing protein 2B), HTS1 (HeLa tumor suppression 1) or p126, is a 1,137 amino acid protein that exists as three alternatively spliced isoforms, and may be involved in cytoskeletal organization and tumorigenicity. Although ST5 isoform 1 is involved in a signaling transduction pathway leading to the activation of MAPK1/ERK 2, isoform 3 may block ERK 2 activation and alter cell morphology and growth. ST5 is widely expressed, with the exception of peripheral blood lymphocytes. Isoform 1 is expressed in several epithelial and fibroblast cell lines, but is absent in lymphoid cell lines, while isoform 3 is expressed in primary cells and weakly tumorigenic cells, but is not found in tumorigenic cell lines. ST5 contains one dDENN domain, one DENN domain and one uDENN domain, as well as a C-terminal region that shares similarity with the Rab 3 family of small GTP binding proteins. The gene that encodes ST5 consists of 217,601 bases and maps to human chromosome 11p15.

REFERENCES

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2. Lichy, J.H., et al. 1992. Identification of a human chromosome 11 gene which is differentially regulated in tumorigenic and nontumorigenic somatic cell hybrids of HeLa cells. *Cell Growth Differ.* 3: 541-548.
3. Online Mendelian Inheritance in Man, OMIM[™]. 1992. Johns Hopkins University, Baltimore, MD. MIM Number: 140750. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Lichy, J.H., et al. 1996. Differential expression of the human ST5 gene in HeLa-fibroblast hybrid cell lines mediated by YY1: evidence that YY1 plays a part in tumor suppression. *Nucleic Acids Res.* 24: 4700-4708.
5. Majidi, M., et al. 1998. Activation of extracellular signal-regulated kinase 2 by a novel Abl-binding protein, ST5. *J. Biol. Chem.* 273: 16608-16614.
6. Hubbs, A.E., et al. 1999. Expression of an isoform of the novel signal transduction protein ST5 is linked to cell morphology. *Oncogene* 18: 2519-2525.

CHROMOSOMAL LOCATION

Genetic locus: St5 (mouse) mapping to 7 E3.

PRODUCT

ST5 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 ST5 shRNA Plasmid (m): sc-153863-SH and ST5 shRNA (m) Lentiviral Particles: sc-153863-V as alternate gene silencing products.

For independent verification of ST5 (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-153863A, sc-153863B and sc-153863C.

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

ST5 siRNA (m) is recommended for the inhibition of ST5 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 ST5 gene expression knockdown using RT-PCR Primer: ST5 (m)-PR: sc-153863-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.

PROTOCOLS

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