SANTA CRUZ BIOTECHNOLOGY, INC.

Scratch1 siRNA (h): sc-77875

BACKGROUND

The Snail family of developmental regulatory proteins is a group of widely conserved zinc-finger transcription factors that are involved in morphogenesis, cell division and cell survival. Scratch1, also known as SCRT, SCRT1, transcriptional repressor scratch 1 or scratch homolog 1 zinc finger protein, is a 348 amino acid nuclear protein that is specifically expressed in brain. Scratch1 belongs to the Snail family of C_2H_2-type zinc finger transcription factors and contains five C_2H_2-type zinc fingers. Considered a neural-specific transcriptional repressor, Scratch1 binds to E-box domains and may promote neural differentiation. It is suggested that Scratch1 may be involved in cancers with neuroendocrine features.

REFERENCES

1. Sefton, M., et al. 1998. Conserved and divergent roles for members of the Snail family of transcription factors in the chick and mouse embryo. Development 125: 3111-3121.
2. Hemavathy, K., et al. 2000. Snail/slug family of repressors: slowly going into the fast lane of development and cancer. Gene 257: 1-12.
3. Nieto, M.A. 2002. The snail superfamily of zinc-finger transcription factors. Nat. Rev. Mol. Cell Biol. 3: 155-166.
4. Katoh, M. and Katoh, M. 2003. Identification and characterization of human SNAIL3 (SNAI3) gene in silico. Int. J. Mol. Med. 11: 383-388.
5. De Craene, B., et al. 2005. Unraveling signalling cascades for the Snail family of transcription factors. Cell. Signal. 17: 535-547.
6. Marín, F. and Nieto, M.A. 2006. The expression of Scratch genes in the developing and adult brain. Dev. Dyn. 235: 2586-2591.
7. Usami, Y., et al. 2008. Snail-associated epithelial-mesenchymal transition promotes oesophageal squamous cell carcinoma motility and progression. J. Pathol. 215: 330-339.

CHROMOSOMAL LOCATION

Genetic locus: SCRT1 (human) mapping to 8q24.3.

PRODUCT

Scratch1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Scratch1 shRNA Plasmid (h): sc-77875-SH and Scratch1 shRNA (h) Lentiviral Particles: sc-77875-V as alternate gene silencing products.

For independent verification of Scratch1 (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-77875A, sc-77875B and sc-77875C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Scratch1 siRNA (h) is recommended for the inhibition of Scratch1 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 µM in 66 µl. 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 Scratch1 gene expression knockdown using RT-PCR Primer: Scratch1 (h)-PR: sc-77875-PR (20 µl). 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.