SANTA CRUZ BIOTECHNOLOGY, INC.

SPR1 siRNA (h): sc-95395

BACKGROUND

SPR1, also known as psors1c2 (psoriasis susceptibility 1 candidate gene 2 protein homolog), is a 134 amino acid secreted protein. SPR1 is expressed in both normal and psoriatic skin, as well as heart and skeletal muscle. One of four single-nucleotide polymorphisms (SNPs) found in SPR1 is linked to psoriasis, a chronic autoimmune disease of the skin that results in red, scaly lesions. Abnormal keratinocyte differentiation, epidermal hyperproliferation, and infiltration of T cells and mononuclear cells are also characteristic of psoriasis, as well as possible reduction in physical and mental functioning. SPR1 may also contribute to the genetic risk of graft versus host disease, a complication that results from rejection of transplanted stem cells or bone marrow. The gene that encodes SPR1 maps to the human chromosome 6p21.33.

REFERENCES

1. Farber, E.M., et al. 1974. The natural history of psoriasis in 5,600 patients. Dermatologica 148: 1-18.
2. Kartasova, T., et al. 1996. Sequence and expression patterns of mouse SPR1: correlation of expression with epithelial function. J. Invest. Dermatol. 106: 294-304.
3. Song, H.J., et al. 1999. Mouse Sprr2 genes: a clustered family of genes showing differential expression in epithelial tissues. Genomics 55: 28-42.
4. Rapp, S.R., et al. 1999. Psoriasis causes as much disability as other major medical diseases. J. Am. Acad. Dermatol. 41: 401-407.
5. Holm, S.J., et al. 2003. Polymorphisms in the SEEK1 and SPR1 genes on 6p21.3 associate with psoriasis in the Swedish population. Exp. Dermatol. 12: 435-444.
6. Chang, Y.T., et al. 2004. Genetic polymorphisms of the HCR gene and a genomic segment in close proximity to HLA-C are associated with patients with psoriasis in Taiwan. Br. J. Dermatol. 150: 1104-1111.
7. Chang, Y.T., et al. 2005. A study of PSORS1C1 gene polymorphisms in wChinese patients with psoriasis. Br. J. Dermatol. 153: 90-96.
8. Agusti-Mejias, A., et al. 2011. Concomitant dermatitis herpetiformis and plaque psoriasis: possible skin manifestations of celiac disease. Actas Dermosifiliogr. 102: 471-473.
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CHROMOSOMAL LOCATION

Genetic locus: PSORS1C2 (human) mapping to 6p21.33.

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.

PRODUCT

SPR1 siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SPR1 shRNA Plasmid (h): sc-95395-SH and SPR1 shRNA (h) Lentiviral Particles: sc-95395-V as alternate gene silencing products.

For independent verification of SPR1 (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-95395A and sc-95395B.

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

SPR1 siRNA (h) is recommended for the inhibition of SPR1 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 SPR1 gene expression knockdown using RT-PCR Primer: SPR1 (h)-PR: sc-95395-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.