SANTA CRUZ BIOTECHNOLOGY, INC.

SUCO siRNA (h): sc-88297

BACKGROUND

SUCO (SUN domain-containing ossification factor), also known as CH1, OPT, SLP1 or C1orf9, is a 1,254 amino acid single-pass type I membrane protein. Containing one SUN domain, SUCO is highly expressed in pancreas and testis, with lower levels of expression found in prostate, ovary, heart, thymus, small intestine and spleen. SUCO is required during late stage embryogenesis bone modeling, and may also regulate type I collagen synthesis during postnatal maturation of osteoblasts. Existing as two alternatively spliced isoforms, SUCO is encoded by a gene mapping to human chromosome 1q24.3 and mouse chromosome 1 H2.1. Chromosome 1 is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1.

REFERENCES

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2. Lau, E.K., et al. 1999. Two novel polymorphic sequences in the glucocerebrosidase gene region enhance mutational screening and founder effect studies of patients with Gaucher disease. Hum. Genet. 104: 293-300.
3. Røsok, O., et al. 2000. The C1orf9 gene encodes a putative transmembrane member of a novel protein family. Biochem. Biophys. Res. Commun. 267: 855-862.
4. Tayebi, N., et al. 2001. Gaucher disease and parkinsonism: a phenotypic and genotypic characterization. Mol. Genet. Metab. 73: 313-321.
5. Plasilova, M., et al. 2004. Exclusion of an extracolonic disease modifier locus on chromosome 1p33-36 in a large Swiss familial adenomatous polyposis kindred. Eur. J. Hum. Genet. 12: 365-371.
6. Betarbet, R., et al. 2008. Fas-associated factor 1 and Parkinson's disease. Neurobiol. Dis. 31: 309-315.
7. Yokoi, T., et al. 2009. Analysis of the vitreous membrane in a case of type 1 Stickler syndrome. Graefes Arch. Clin. Exp. Ophthalmol. 247: 715-718.

CHROMOSOMAL LOCATION

Genetic locus: SUCO (human) mapping to 1q24.3.

PRODUCT

SUCO 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 SUCO shRNA Plasmid (h): sc-88297-SH and SUCO shRNA (h) Lentiviral Particles: sc-88297-V as alternate gene silencing products.

For independent verification of SUCO (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-88297A, sc-88297B and sc-88297C.

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

SUCO siRNA (h) is recommended for the inhibition of SUCO 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 SUCO gene expression knockdown using RT-PCR Primer: SUCO (h)-PR: sc-88297-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.

PROTOCOLS

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