SANTA CRUZ BIOTECHNOLOGY, INC.

SLURP1 siRNA (h): sc-77513

BACKGROUND

SLURP1 (secreted LY6/PLAUR domain containing 1), also known as MDM, ARS, ANUP (anti-neoplastic urinary protein), LY6LS or ArsB (ARS component B), is a 103 amino acid secreted protein that exists as a homodimer possessing antitumor activity. Found in esophagus, stomach, exocervix, gums, urine, sweat, saliva, plasma and tears, SLURP1 is most highly expressed in the acrosyringium of the granular layer of skin, where it helps maintain the structure of the keratinocyte layers of the skin. Also considered a marker for late skin differentiation, SLURP1 contains one UPAR/Ly6 domain and is the cause of an autosomal recessive disorder of the skin known as Mal de Meleda (MDM). MDM Is characterized by nail abnormalities, keratotic skin lesions, transgressive palmoplantar keratoderma (PPK), perioral erythema and may sometimes include hyperhidrosis.

REFERENCES

1. Ridge, R.J. and Sloane, N.H. 1996. Partial N-terminal amino acid sequence of the anti-neoplastic urinary protein (ANUP) and the anti-tumour effect of the N-terminal nonapeptide of the unique cytokine present in human granulocytes. Cytokine 8: 1-5.
2. Adermann, K., et al. 1999. Structural and phylogenetic characterization of human SLURP1, the first secreted mammalian member of the Ly-6/uPAR protein superfamily. Protein Sci. 8: 810-819.
3. Fischer, J., et al. 2001. Mutations in the gene encoding SLURP1 in Mal de Meleda. Hum. Mol. Genet. 10: 875-880.
4. Charfeddine, C., et al. 2003. A novel missense mutation in the gene encoding SLURP1 in patients with Mal de Meleda from northern Tunisia. Br. J. Dermatol. 149: 1108-1115.
5. Mastrangeli, R., et al. 2003. ARS Component B: structural characterization, tissue expression and regulation of the gene and protein (SLURP1) associated with Mal de Meleda. Eur. J. Dermatol. 13: 560-570.
6. Eckl, K.M., et al. 2003. Mal de Meleda (MDM) caused by mutations in the gene for SLURP1 in patients from Germany, Turkey, Palestine and the United Arab Emirates. Hum. Genet. 112: 50-56.
7. Marrakchi, S., et al. 2003. Novel mutations in the gene encoding secreted lymphocyte antigen-6/urokinase-type plasminogen activator receptor-related protein-1 (SLURP1) and description of five ancestral haplotypes in patients with Mal de Meleda. J. Invest. Dermatol. 120: 351-355.

CHROMOSOMAL LOCATION

Genetic locus: SLURP1 (human) mapping to 8q24.3.

PRODUCT

SLURP1 siRNA (h) is a target-specific 19-25 nt siRNA 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 SLURP1 shRNA Plasmid (h): sc-77513-SH and SLURP1 shRNA (h) Lentiviral Particles: sc-77513-V as alternate gene silencing 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

SLURP1 siRNA (h) is recommended for the inhibition of SLURP1 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 SLURP1 gene expression knockdown using RT-PCR Primer: SLURP1 (h)-PR: sc-77513-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. He, X., et al. 2021. Endogenous α7 nAChR agonist SLURP1 facilitates *Escherichia coli* K1 crossing the blood-brain barrier. Front. Immunol. 12: 745854.

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.