



## UST6 siRNA (m): sc-154951

### BACKGROUND

Members of the SLC22 family mediate anion transport and are expressed primarily in liver and kidney. UST6 (unknown substrate transporter 6), also known as HIMTP or SLC22A25 (solute carrier family 22, member 25), is a 547 amino acid multi-pass membrane protein belonging to the major facilitator superfamily and the organic cation transporter family. Exclusively expressed in liver in both embryo and adult, UST6 is involved in organic anion transport. The gene encoding SLC22A25 is located on human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

### REFERENCES

1. Koepsell, H. and Endou, H. 2004. The SLC22 drug transporter family. *Pflügers Arch.* 447: 666-676.
2. Eraly, S.A., Monte, J.C. and Nigam, S.K. 2004. Novel SLC22 transporter homologs in fly, worm, and human clarify the phylogeny of organic anion and cation transporters. *Physiol. Genomics* 18: 12-24.
3. Taylor, T.D., Noguchi, H., Totoki, Y., Toyoda, A., Kuroki, Y., Dewar, K., Lloyd, C., Itoh, T., Takeda, T., Kim, D.W., She, X., Barlow, K.F., Bloom, T., Bruford, E., Chang, J.L., Cuomo, C.A., Eichler, E., Fitzgerald, M.G., Jaffe, D.B., et al. 2006. Human chromosome 11 DNA sequence and analysis including novel gene identification. *Nature* 440: 497-500.
4. Jacobsson, J.A., Haitina, T., Lindblom, J. and Fredriksson, R. 2007. Identification of six putative human transporters with structural similarity to the drug transporter SLC22 family. *Genomics* 90: 595-609.
5. Rizwan, A.N. and Burckhardt, G. 2007. Organic anion transporters of the SLC22 family: biopharmaceutical, physiological, and pathological roles. *Pharm. Res.* 24: 450-470.
6. Ogasawara, K., Terada, T., Motohashi, H., Asaka, J., Aoki, M., Katsura, T., Kamba, T., Ogawa, O. and Inui, K. 2008. Analysis of regulatory polymorphisms in organic ion transporter genes (SLC22A) in the kidney. *J. Hum. Genet.* 53: 607-614.
7. Wu, W., Baker, M.E., Eraly, S.A., Bush, K.T. and Nigam, S.K. 2009. Analysis of a large cluster of SLC22 transporter genes, including novel USTs, reveals species-specific amplification of subsets of family members. *Physiol. Genomics* 38: 116-124.

### CHROMOSOMAL LOCATION

Genetic locus: Slc22a28 (mouse) mapping to 19 A.

### PRODUCT

UST6 siRNA (m) 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see UST6 shRNA Plasmid (m): sc-154951-SH and UST6 shRNA (m) Lentiviral Particles: sc-154951-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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

### APPLICATIONS

UST6 siRNA (m) is recommended for the inhibition of UST6 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  $\mu$ M in 66  $\mu$ 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 UST6 gene expression knockdown using RT-PCR Primer: UST6 (m)-PR: sc-154951-PR (20  $\mu$ 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](http://www.scbt.com) for detailed protocols and support products.