

# Flipt1 siRNA (h): sc-88724

## BACKGROUND

Organic ion transporters are transmembrane proteins that are essential to excretion of xenobiotics, such as drugs, toxins and metabolites. Flipt1 (fly-like putative transporter 1), also known as SLC22A15 (solute carrier family 22 member 15) is a 547 amino acid multi-pass membrane protein that is a member of the organic ion transporter family. Flipt1 is expressed at high levels in liver, skeletal muscle, heart, white blood cells and placenta and is also expressed in several intestinal tumor cell lines. The gene encoding Flipt1 maps to human chromosome 1, which is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1. There are two isoforms of Flipt1 that are produced as a result of alternative splicing events.

## REFERENCES

1. Eraly, S.A. and Nigam, S.K. 2002. Novel human cDNAs homologous to *Drosophila* Orct and mammalian carnitine transporters. *Biochem. Biophys. Res. Commun.* 297: 1159-1166.
2. Molderings, G.J., et al. 2003. Identification and pharmacological characterization of a specific agmatine transport system in human tumor cell lines. *Ann. N.Y. Acad. Sci.* 1009: 75-81.
3. You, G. 2004. The role of organic ion transporters in drug disposition: an update. *Curr. Drug Metab.* 5: 55-62.
4. Girardin, F. 2006. Membrane transporter proteins: a challenge for CNS drug development. *Dialogues Clin. Neurosci.* 8: 311-321.
5. Hagenbuch, B. and Gui, C. 2008. Xenobiotic transporters of the human organic anion transporting polypeptides (OATP) family. *Xenobiotica* 38: 778-801.
6. Ciarimboli, G. 2008. Organic cation transporters. *Xenobiotica* 38: 936-971.
7. Duan, P. and You, G. 2010. Short-term regulation of organic anion transporters. *Pharmacol. Ther.* 125: 55-61.
8. Saito, H. 2010. Pathophysiological regulation of renal SLC22A organic ion transporters in acute kidney injury: pharmacological and toxicological implications. *Pharmacol. Ther.* 125: 79-91.

## CHROMOSOMAL LOCATION

Genetic locus: SLC22A15 (human) mapping to 1p13.1.

## PRODUCT

Flipt1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Flipt1 shRNA Plasmid (h): sc-88724-SH and Flipt1 shRNA (h) Lentiviral Particles: sc-88724-V as alternate gene silencing products.

For independent verification of Flipt1 (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-88724A, sc-88724B and sc-88724C.

## 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

Flipt1 siRNA (h) is recommended for the inhibition of Flipt1 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  $\mu$ 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 Flipt1 gene expression knockdown using RT-PCR Primer: Flipt1 (h)-PR: sc-88724-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.