

TETRA[™] siRNA (h): sc-89326

BACKGROUND

TETRA[™] (tetracycline transporter-like protein), also known as MFSD10 (major facilitator superfamily domain-containing protein 10), is a 455 amino acid member of the major facilitator superfamily. Localized to the membrane, TETRA[™] may function as an efflux pump of organic anions, including non-steroidal anti-inflammatory drugs diclofenac and indomethacin. The gene that encodes TETRA[™] maps to human chromosome 4p16.3, which represents approximately 6% of the human genome and contains nearly 900 genes. Notably, the Huntingtin gene, which is found to encode an expanded glutamine tract in cases of Huntington's disease, is on chromosome 4. FGFR-3 is also encoded on chromosome 4 and has been associated with thanatophoric dwarfism, achondroplasia, Muenke syndrome and bladder cancer. Chromosome 4 is also tied to Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease. Chromosome 4 reportedly contains the largest gene deserts (regions of the genome with no protein encoding genes) and has one of the two lowest recombination frequencies of the human chromosomes.

REFERENCES

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3. Chandler, R.J., et al. 2007. Metabolic phenotype of methylmalonic acidemia in mice and humans: the role of skeletal muscle. *BMC Med. Genet.* 8: 64.
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7. Ruiz-Perez, V.L., et al. 2007. EVC is a positive mediator of Ihh-regulated bone growth that localises at the base of chondrocyte cilia. *Development* 134: 2903-2912.
8. Mima, S., et al. 2007. Identification of the TP01 gene in yeast, and its human orthologue TETRA[™], which cause resistance to NSAIDs. *FEBS Lett.* 581: 1457-1463.
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CHROMOSOMAL LOCATION

Genetic locus: MFSD10 (human) mapping to 4p16.3.

PROTOCOLS

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

PRODUCT

TETRA[™] 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TETRA[™] shRNA Plasmid (h): sc-89326-SH and TETRA[™] shRNA (h) Lentiviral Particles: sc-89326-V as alternate gene silencing products.

For independent verification of TETRA[™] (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-89326A and sc-89326B.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

TETRA[™] siRNA (h) is recommended for the inhibition of TETRA[™] 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 μ M in 66 μ 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 TETRA[™] gene expression knockdown using RT-PCR Primer: TETRA[™] (h)-PR: sc-89326-PR (20 μ 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.