SANTA CRUZ BIOTECHNOLOGY, INC.

Txl-2 siRNA (h): sc-78475

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The Power to Question

BACKGROUND

Thioredoxin (Trx) is a redox protein that is found in several species, such as bacteria, plants and mammals, and contains a conserved active site, consisting of Trp-Cys-Gly-Pro-Cys. Trx acts as a hydrogen donor for ribonucleotide reductase, modulates the DNA-binding activity of several transcription factors, stimulates cell growth, is an inhibitor of apoptosis and plays a role in the protection against oxidative stress. Txl-2 (Thioredoxin-like protein 2), also known as Thioredoxin domain-containing protein 6, is a 330 amino acid cytoplasmic protein that contains a domain that is evolutionarily related to Trx's active domain, however it does not have detectable catalytic activity. Txl-2 is expressed in spermatid tail and cilia of lung epithelium, therefore it may play a role in the regulation of microtubule physiology. Txl-2 is the antigen that the MC3 antibody recognizes in cases of colorectal cancer. There are three isoforms of Txl-2 that are produced as a result of alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: NME9 (human) mapping to 3q22.3.

PRODUCT

Txl-2 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 Txl-2 shRNA Plasmid (h): sc-78475-SH and Txl-2 shRNA (h) Lentiviral Particles: sc-78475-V as alternate gene silencing products.

For independent verification of Txl-2 (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-78475A, sc-78475B and sc-78475C.

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

Txl-2 siRNA (h) is recommended for the inhibition of Txl-2 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 Txl-2 gene expression knockdown using RT-PCR Primer: Txl-2 (h)-PR: sc-78475-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.