



TXNDC15 siRNA (m): sc-154821

BACKGROUND

Thioredoxins comprise a family of small proteins that, by catalyzing the oxidation of disulfide bonds, participate in redox reactions throughout the cell. Proteins that contain thioredoxin domains do not necessarily convey the oxidative properties of thioredoxins, but generally function as disulfide isomerases that enzymatically rearrange disulfide bonds found in various proteins. TXNDC15 (thioredoxin domain containing 15), also known as UNQ335, is a 360 amino acid single-pass type I membrane protein that contains a thioredoxin domain. Existing as two alternatively spliced isoforms, TXNDC15 is encoded by a gene located on human chromosome 5q31.1. Human chromosome 5 contains 181 million base pairs and comprises nearly 6% of the human genome. Deletion of the p arm of chromosome 5 leads to Cri du chat syndrome, while deletion of the q arm or of chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

REFERENCES

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- Matsuo, Y., et al. 2001. Identification of a novel thioredoxin-related transmembrane protein. *J. Biol. Chem.* 276: 10032-10038.
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CHROMOSOMAL LOCATION

Genetic locus: Txnnc15 (mouse) mapping to 13 B1.

PRODUCT

TXNDC15 siRNA (m) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TXNDC15 shRNA Plasmid (m): sc-154821-SH and TXNDC15 shRNA (m) Lentiviral Particles: sc-154821-V as alternate gene silencing products.

For independent verification of TXNDC15 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-154821A, sc-154821B and sc-154821C.

PROTOCOLS

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

TXNDC15 siRNA (m) is recommended for the inhibition of TXNDC15 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 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 TXNDC15 gene expression knockdown using RT-PCR Primer: TXNDC15 (m)-PR: sc-154821-PR (20 μ l, 499 bp). 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.