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SANTA CRUZ BIOTECHNOLOGY, INC.

Selenoprotein O siRNA (m): sc-153328

BACKGROUND

Selenium is an essential trace element that is incorporated as selenocysteine into the primary structure of Selenoproteins. Nutritional deficiency of selenium decreases Selenoprotein concentrations and leads to pathologic conditions. Most of the known Selenoproteins are members of the glutathione peroxidase or iodothyronine deiodinase families. Selenoprotein O, also known as SELO, is a 669 amino acid globular protein that belongs to the UPF0061 (SELO) family and contains a selenocysteine (Sec) residue at its active site. Expressed in a variety of tissues, Selenoprotein O is encoded by the UGA codon that typically signals translation termination, mapping to human chromosome 22. Chromosome 22 houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, Neurofibromatosis type 2, autism and schizophrenia.

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Selo (mouse) mapping to 15 E3.

PRODUCT

Selenoprotein O 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Selenoprotein O shRNA Plasmid (m): sc-153328-SH and Selenoprotein O shRNA (m) Lentiviral Particles: sc-153328-V as alternate gene silencing products.

For independent verification of Selenoprotein O (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-153328A, sc-153328B and sc-153328C.

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

Selenoprotein O siRNA (m) is recommended for the inhibition of Selenoprotein O 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 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 Selenoprotein O gene expression knockdown using RT-PCR Primer: Selenoprotein O (m)-PR: sc-153328-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.