SANTA CRUZ BIOTECHNOLOGY, INC.

GDC siRNA (h): sc-90626

BACKGROUND

GDC (Graves disease carrier protein), also known as SLC25A16 (solute carrier family 25 member 16), member 16), ML7, GDA or HGT.1, is a 332 amino acid multi-pass membrane protein belonging to the mitochondrial carrier family. Localizing to mitochondrial inner membrane, GDC is essential for the accumulation of coenzyme A in the mitochondrial matrix and facilitates the transport and exchange of molecules between the cytosol and the mitochondrial matrix space. GDC contains three solcar repeats and is encoded by a gene mapping to human chromosome 10q21.3, a region associated with Graves disease. Making up 4.5% of the human genome, chromosome 10 encodes roughly 800 genes including PTEN, a tumor suppressor gene that has been linked to the development of Cowden syndrome. The chromosome 10 encoded gene ERCC6 is important for DNA repair and is linked to Cockayne syndrome which is characterized by extreme photosensitivity and premature aging.

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CHROMOSOMAL LOCATION

Genetic locus: SLC25A16 (human) mapping to 10q21.3.

PRODUCT

GDC 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 GDC shRNA Plasmid (h): sc-90626-SH and GDC shRNA (h) Lentiviral Particles: sc-90626-V as alternate gene silencing products.

For independent verification of GDC (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-90626A, sc-90626B and sc-90626C.

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

GDC siRNA (h) is recommended for the inhibition of GDC 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 GDC gene expression knockdown using RT-PCR Primer: GDC (h)-PR: sc-90626-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.