

NAGPA siRNA (h): sc-93182

BACKGROUND

NAGPA (N-acetylglucosamine-1-phosphodiester α -N-acetylglucosaminidase), also known as phosphodiester α -GlcNAcase, mannose 6-phosphate-uncovering enzyme, UCE (uncovering enzyme) or APAA, is a 515 amino acid single-pass type I membrane protein of the Golgi apparatus that removes N-acetyl-D-glucosamine (GlcNAc) residues from GlcNAc- α -P-mannose moieties. Existing as three alternatively spliced isoforms, NAGPA contains one EGF-like domain and forms two disulfide-linked homodimers that are arranged as a homotetramer. The gene encoding NAGPA maps to human chromosome 16 which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: NAGPA (human) mapping to 16p13.3.

PRODUCT

NAGPA siRNA (h) is a target-specific 19-25 nt siRNA 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 NAGPA shRNA Plasmid (h): sc-93182-SH and NAGPA shRNA (h) Lentiviral Particles: sc-93182-V as alternate gene silencing 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

NAGPA siRNA (h) is recommended for the inhibition of NAGPA 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 NAGPA gene expression knockdown using RT-PCR Primer: NAGPA (h)-PR: sc-93182-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.