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GDE1 siRNA (m): sc-145373

BACKGROUND

GDE1 (glycerophosphodiester phosphodiesterase 1), also known as MIR16, is a 331 amino acid multi-pass membrane protein that localizes to both the membrane and the cytoplasm and contains one GPD domain. Expressed in a wide variety of tissues, GDE1 uses magnesium as a cofactor to catalyze the conversion of 1-(sn-glycero-3-phospho)-1D-myo-inositol to myo-inositol and sn-glycerol 3-phosphate, an event that is modulated by G protein signaling pathways and provides a link between phosphoinositide metabolism and G protein signal transduction. The gene encoding GDE1 maps to human chromosome 16p12.3, 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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CHROMOSOMAL LOCATION

Genetic locus: Gde1 (mouse) mapping to 7 F2.

PROTOCOLS

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

PRODUCT

GDE1 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 GDE1 shRNA Plasmid (m): sc-145373-SH and GDE1 shRNA (m) Lentiviral Particles: sc-145373-V as alternate gene silencing products.

For independent verification of GDE1 (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-145373A, sc-145373B and sc-145373C.

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

GDE1 siRNA (m) is recommended for the inhibition of GDE1 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 GDE1 gene expression knockdown using RT-PCR Primer: GDE1 (m)-PR: sc-145373-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.