SANTA CRUZ BIOTECHNOLOGY, INC.

GDE2 siRNA (m): sc-145374

BACKGROUND

GDE2 (glycerophosphodiester phosphodiesterase 2), also known as GDPD5 (glycerophosphodiester phosphodiesterase domain-containing protein 5) or PP1665, is a 605 amino acid protein that contains one GDPD domain and belongs to the glycerophosphoryl diester phosphodiesterase family. GDE2 promotes neurite formation and is implicated in osmotic regulation of cellular glycerophosphocholine. Existing as five alternatively spliced isoforms, GDE2 localizes to cytoplasm, cell projections and endomembrane. GDE2 interacts with PRX to influence motor neuron differentiation and also plays a role in glycerol metabolism. GDE2 is encoded by a gene that maps to human chromosome 11q13.4.

REFERENCES

1. Rao, M. and Sockanathan, S. 2005. Transmembrane protein GDE2 induces motor neuron differentiation *in vivo*. Science 309: 2212-2215.
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3. Lang, Q., Zhang, H., Li, J., Yin, H., Zhang, Y., Tang, W., Wan, B. and Yu, L. 2008. Cloning and characterization of a human GDPD domain-containing protein GDPD5. Mol. Biol. Rep. 35: 351-359.
4. Gallazzini, M., Ferraris, J.D. and Burg, M.B. 2008. GDPD5 is a glycerophosphocholine phosphodiesterase that osmotically regulates the osmoprotective organic osmolyte GPC. Proc. Natl. Acad. Sci. USA 105: 11026-11031.
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6. Online Mendelian Inheritance in Man, OMIM™. 2010. Johns Hopkins University, Baltimore, MD. MIM Number: 609632. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: Gdpd5 (mouse) mapping to 7 E2.

PRODUCT

GDE2 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 GDE2 shRNA Plasmid (m): sc-145374-SH and GDE2 shRNA (m) Lentiviral Particles: sc-145374-V as alternate gene silencing products.

For independent verification of GDE2 (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-145374A, sc-145374B and sc-145374C.

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 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

GDE2 siRNA (m) is recommended for the inhibition of GDE2 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 GDE2 gene expression knockdown using RT-PCR Primer: GDE2 (m)-PR: sc-145374-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.