SANTA CRUZ BIOTECHNOLOGY, INC.

GDE3 siRNA (m): sc-145375

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

GDE3, also known as glycerophosphodiester phosphodiesterase 3, glycerophosphodiester phosphodiesterase domain containing 2 (GDPD2) or osteoblast differentiation promoting factor (OBDPF), is a 539 amino acid protein belonging to the glycerophosphoryl diester phosphodiesterase family. Possessing glycerophosphoinositol inositolphosphodiesterase activity, GDE3 hydrolyzes glycerophosphoinositol to form inositol 1-phosphate and glycerol, and is suggested to play a role in Actin cytoskeleton remodeling and osteoblast differentiation and growth. A multi-pass membrane protein, GDE3 localizes to cell membrane and cytoplasm, and colocalizes with Actin in the cytoskeleton. GDE3 contains one GDPD domain, binds calcium as a cofactor and is encoded by a gene mapping to human chromosome Xq13.1.

REFERENCES

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2. Yanaka, N. 2007. Mammalian glycerophosphodiester phosphodiesterases. Biosci. Biotechnol. Biochem. 71: 1811-1818.
3. Omori, K. and Kotera, J. 2007. Overview of PDEs and their regulation. Circ. Res. 100: 309-327.
4. Kleppisch, T. 2009. Phosphodiesterases in the central nervous system. Handb. Exp. Pharmacol. 191: 71-92.
5. Corda, D., Kudo, T., Zizza, P., Iurisci, C., Kawai, E., Kato, N., Yanaka, N. and Mariggiò, S. 2009. The developmentally regulated osteoblast phosphodiesterase GDE3 is glycerophosphoinositol-specific and modulates cell growth. J. Biol. Chem. 284: 24848-24856.

CHROMOSOMAL LOCATION

Genetic locus: Gdpd2 (mouse) mapping to X C3.

PRODUCT

GDE3 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 GDE3 shRNA Plasmid (m): sc-145375-SH and GDE3 shRNA (m) Lentiviral Particles: sc-145375-V as alternate gene silencing products.

For independent verification of GDE3 (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-145375A, sc-145375B and sc-145375C.

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

GDE3 siRNA (m) is recommended for the inhibition of GDE3 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 GDE3 gene expression knockdown using RT-PCR Primer: GDE3 (m)-PR: sc-145375-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.