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# GDAP1L1 siRNA (m): sc-145370

## BACKGROUND

Glutathione S-transferases (GSTs) function to conjugate reduced glutathione to many exogenous and endogenous hydrophobic electrophiles. As a GST-like protein, GDAP1 (ganglioside-induced differentiation-associated protein 1) may function in the signal transduction pathway that is responsible for ganglioside-induced neurite differentiation and also possibly plays a role in protecting myelin membranes from free-radical damage. Mutations in the gene encoding GDAP1 is the cause of many forms of Charcot-Marie-Tooth diseases, a common inherited disorder of the peripheral nervous system that is characterized by reduced nerve conduction velocities, slow progressive distal muscle atrophy and absent deep tendon reflexes. A paralogue of GDAP1, GDAP1L1 (ganglioside-induced differentiation-associated protein 1-like 1) is a 367 amino acid protein that shares significant sequence and structural similarity with GDAP1. There are two isoforms of GDAP1L1 that are produced as a result of alternative splicing events.

## REFERENCES

1. Marco, A., Cuesta, A., Pedrola, L., Palau, F. and Marín, I. 2004. Evolutionary and structural analyses of GDAP1, involved in Charcot-Marie-Tooth disease, characterize a novel class of glutathione transferase-related genes. *Mol. Biol. Evol.* 21: 176-187.
2. Shield, A.J., Murray, T.P. and Board, P.G. 2006. Functional characterisation of ganglioside-induced differentiation-associated protein 1 as a glutathione transferase. *Biochem. Biophys. Res. Commun.* 347: 859-866.
3. Sevilla, T., Jaijo, T., Nauffal, D., Collado, D., Chumillas, M.J., Vilchez, J.J., Muelas, N., Bataller, L., Domenech, R., Espinós, C. and Palau, F. 2008. Vocal cord paresis and diaphragmatic dysfunction are severe and frequent symptoms of GDAP1-associated neuropathy. *Brain* 131: 3051-3061.
4. Rougeot, C., Chabrier, S., Camdessanche, J.P., Prieur, F., d'Anjou, M.C. and Latour, P. 2008. Clinical, electrophysiological and genetic studies of two families with mutations in the GDAP1 gene. *Neuropediatrics* 39: 184-187.
5. Cassereau, J., Chevrollier, A., Gueguen, N., Malinge, M.C., Letournel, F., Nicolas, G., Richard, L., Ferre, M., Verny, C., Dubas, F., Procaccio, V., Amati-Bonneau, P., Bonneau, D. and Reynier, P. 2009. Mitochondrial complex I deficiency in GDAP1-related autosomal dominant Charcot-Marie-Tooth disease (CMT2K). *Neurogenetics* 10: 145-150.
6. Abe, A., Numakura, C., Saito, K., Koide, H., Oka, N., Honma, A., Kishikawa, Y. and Hayasaka, K. 2009. Neurofilament light chain polypeptide gene mutations in Charcot-Marie-Tooth disease: nonsense mutation probably causes a recessive phenotype. *J. Hum. Genet.* 54: 94-97.
7. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 606598. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: Gdap1l1 (mouse) mapping to 2 H3.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## PRODUCT

GDAP1L1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GDAP1L1 shRNA Plasmid (m): sc-145370-SH and GDAP1L1 shRNA (m) Lentiviral Particles: sc-145370-V as alternate gene silencing products.

For independent verification of GDAP1L1 (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-145370A, sc-145370B and sc-145370C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

GDAP1L1 siRNA (m) is recommended for the inhibition of GDAP1L1 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  $\mu$ M in 66  $\mu$ 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 GDAP1L1 gene expression knockdown using RT-PCR Primer: GDAP1L1 (m)-PR: sc-145370-PR (20  $\mu$ 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.