GIDRP88 siRNA (h): sc-90674



The Power to Question

BACKGROUND

GIDRP88 (growth inhibition and differentiation-related protein 88), also known as C10orf28, R3HCC1L (R3H and coiled-coil domain-containing protein 1-like) or putative mitochondrial space protein 32.1, is a 792 amino acid protein that exists as three alternatively spliced isoforms. Expressed predominately in placenta, GIDRP88 in encoded by a gene that maps to human chromosome 10, which spans nearly 135 million base pairs, makes up approximately 4.5% of total DNA in cells and encodes nearly 1,200 genes. Several protein-coding genes, including those that encode for chemokines, cadherins, excision repair proteins, early growth response factors (Egrs) and fibroblast growth receptors (FGFRs), are located on chromosome 10. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie-Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromatic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

REFERENCES

- Jabs, E.W., Li, X., Scott, A.F., Meyers, G., Chen, W., Eccles, M., Mao, J.I., Charnas, L.R., Jackson, C.E. and Jaye, M. 1994. Jackson-Weiss and Crouzon syndromes are allelic with mutations in fibroblast growth factor receptor 2. Nat. Genet. 8: 275-279.
- 2. Deloukas, P., French, L., Meitinger, T. and Moschonas, N.K. 2000. Report of the third international workshop on human chromosome 10 mapping and sequencing 1999. Cytogenet. Cell Genet. 90: 1-12.
- 3. Gilbert, F. 2001. Chromosome 10. Genet. Test. 5: 69-82.
- Berger, P., Young, P. and Suter, U. 2002. Molecular cell biology of Charcot-Marie-Tooth disease. Neurogenetics 4: 1-15.
- Teresi, R.E., Zbuk, K.M., Pezzolesi, M.G., Waite, K.A. and Eng, C. 2007. Cowden syndrome-affected patients with PTEN promoter mutations demonstrate abnormal protein translation. Am. J. Hum. Genet. 81: 756-767.
- Cho, M.Y., Kim, H.S., Eng, C., Kim, D.S., Kang, S.J., Eom, M., Yi, S.Y. and Bronner, M.P. 2008. First report of ovarian dysgerminoma in Cowden syndrome with germline PTEN mutation and PTEN-related 10q loss of tumor heterozygosity. Am. J. Surg. Pathol. 32: 1258-1264.
- 7. Yin, Y. and Shen, W.H. 2008. PTEN: a new guardian of the genome. Oncogene 27: 5443-5453.
- Laugel, V., Dalloz, C., Durand, M., Sauvanaud, F., Kristensen, U., Vincent, M.C., Pasquier, L., Odent, S., Cormier-Daire, V., Gener, B., Tobias, E.S., Tolmie, J.L., Martin-Coignard, D., Drouin-Garraud, V., Heron, D., et al. 2010. Mutation update for the CSB/ERCC6 and CSA/ERCC8 genes involved in Cockayne syndrome. Hum. Mutat. 31: 113-126.

CHROMOSOMAL LOCATION

Genetic locus: R3HCC1L (human) mapping to 10q24.2.

PROTOCOLS

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

PRODUCT

GIDRP88 siRNA (h) 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 GIDRP88 shRNA Plasmid (h): sc-90674-SH and GIDRP88 shRNA (h) Lentiviral Particles: sc-90674-V as alternate gene silencing products.

For independent verification of GIDRP88 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-90674A, sc-90674B and sc-90674C.

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

GIDRP88 siRNA (h) is recommended for the inhibition of GIDRP88 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 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 GIDRP88 gene expression knockdown using RT-PCR Primer: GIDRP88 (h)-PR: sc-90674-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.

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