

Get4 siRNA (h): sc-89392

BACKGROUND

Get4 (Golgi to ER traffic protein 4 homolog), also known as CEE (conserved edge-expressed protein), TRC35 (transmembrane domain recognition complex 35 kDa subunit) or CGI-20, is a 327 amino acid cytoplasmic protein that exists as two alternatively spliced isoforms. Get4 forms a multiprotein complex, known as the BAT3 complex, with UBL4A, BAT3 and ARSA. The BAT3 complex plays a role in transporting tail-anchored membrane proteins to the endoplasmic reticulum membrane. The gene encoding Get4 maps to human chromosome 7p22.3. Human chromosome 7 houses over 1,000 genes, comprises nearly 5% of the human genome and has been linked to Osteogenesis imperfecta, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

1. Tsiouras, P., Myers, J.C., Ramirez, F. and Prockop, D.J. 1983. Restriction fragment length polymorphism associated with the pro α 2(I) gene of human type I procollagen. Application to a family with an autosomal dominant form of Osteogenesis imperfecta. *J. Clin. Invest.* 72: 1262-1267.
2. Lai, C.H., Chou, C.Y., Ch'ang, L.Y., Liu, C.S. and Lin, W. 2000. Identification of novel human genes evolutionarily conserved in *Caenorhabditis elegans* by comparative proteomics. *Genome Res.* 10: 703-713.
3. Iwasaki, S., Usami, S., Abe, S., Isoda, H., Watanabe, T. and Hoshino, T. 2001. Long-term audiological feature in Pendred syndrome caused by PDS mutation. *Arch. Otolaryngol. Head Neck Surg.* 127: 705-708.
4. Reiner, O., Sapoznik, S. and Sapir, T. 2006. Lissencephaly 1 linking to multiple diseases: mental retardation, neurodegeneration, schizophrenia, male sterility, and more. *Neuromolecular Med.* 8: 547-565.
5. Fernandes, J.M., Macqueen, D.J., Lee, H.T. and Johnston, I.A. 2008. Genomic, evolutionary, and expression analyses of cee, an ancient gene involved in normal growth and development. *Genomics* 91: 315-325.
6. Chang, Y.W., Chuang, Y.C., Ho, Y.C., Cheng, M.Y., Sun, Y.J., Hsiao, C.D. and Wang, C. 2010. Crystal structure of Get4-Get5 complex and its interactions with Sgt2, Get3, and Ydj1. *J. Biol. Chem.* 285: 9962-9970.
7. Mariappan, M., Li, X., Stefanovic, S., Sharma, A., Mateja, A., Keenan, R.J. and Hegde, R.S. 2010. A ribosome-associating factor chaperones tail-anchored membrane proteins. *Nature* 466: 1120-1124.
8. Online Mendelian Inheritance in Man, OMIM[™]. 2010. Johns Hopkins University, Baltimore, MD. MIM Number: 612056. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: GET4 (human) mapping to 7p22.3.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

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

PRODUCT

Get4 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 Get4 shRNA Plasmid (h): sc-89392-SH and Get4 shRNA (h) Lentiviral Particles: sc-89392-V as alternate gene silencing products.

For independent verification of Get4 (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-89392A, sc-89392B and sc-89392C.

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

Get4 siRNA (h) is recommended for the inhibition of Get4 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 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 Get4 gene expression knockdown using RT-PCR Primer: Get4 (h)-PR: sc-89392-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.