

1500031L02Rik siRNA (m): sc-108244

BACKGROUND

C3orf34 (chromosome 3 open reading frame 34), also known as MGC14126, is a 163 amino acid protein encoded by a gene that maps to human chromosome 3q29. Chromosome 3 is made up of approximately 214 million bases encoding over 1,100 genes. Notably, there is a chemokine receptor gene cluster and a variety of human cancer related loci on chromosome 3. Particular regions of the chromosome 3 short arm are deleted in many types of cancer cells. Key tumor suppressing genes on chromosome 3 encode apoptosis mediator RASSF1, cell migration regulator HYAL1 and angiogenesis suppressor SEMA3B. Marfan syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

1. Müller, S., Stanyon, R., Finelli, P., Archidiacono, N. and Wienberg, J. 2000. Molecular cytogenetic dissection of human chromosomes 3 and 21 evolution. *Proc. Natl. Acad. Sci. USA* 97: 206-211.
2. Braga, E.A., Kashuba, V.I., Maliukova, A.V., Loginov, V.I., Senchenko, V.N., Bazov, I.V., Kiselev, L.L. and Zabarovskii, E.R. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. *Mol. Biol.* 37: 194-211.
3. Tsend-Ayush, E., Grützner, F., Yue, Y., Grossmann, B., Hänsel, U., Sudbrak, R. and Haaf, T. 2004. Plasticity of human chromosome 3 during primate evolution. *Genomics* 83: 193-202.
4. Yue, Y., Grossmann, B., Ferguson-Smith, M., Yang, F. and Haaf, T. 2005. Comparative cytogenetics of human chromosome 3q21.3 reveals a hot spot for ectopic recombination in hominoid evolution. *Genomics* 85: 36-47.
5. Darai, E., Kost-Alimova, M., Kiss, H., Kansoul, H., Klein, G. and Imreh, S. 2005. Evolutionarily plastic regions at human 3p21.3 coincide with tumor breakpoints identified by the "elimination test". *Genomics* 86: 1-12.
6. Yue, Y., Grossmann, B., Tsend-Ayush, E., Grützner, F., Ferguson-Smith, M.A., Yang, F. and Haaf, T. 2005. Genomic structure and paralogous regions of the inversion breakpoint occurring between human chromosome 3p12.3 and orangutan chromosome 2. *Cytogenet. Genome Res.* 108: 98-105.
7. Muzny, D.M., Scherer, S.E., Kaul, R., Wang, J., Yu, J., Sudbrak, R., Buhay, C.J., Chen, R., Cree, A., Ding, Y., Dugan-Rocha, S., Gill, R., Gunaratne, P., Harris, R.A., Hawes, A.C., Hernandez, J., Hodgson, A.V., Hume, J., et al. 2006. The DNA sequence, annotation and analysis of human chromosome 3. *Nature* 440: 1194-1198.
8. Nareyek, G., Zeschneck, M., Prescher, G., Lohmann, D.R. and Anastassiou, G. 2006. Establishment and characterization of two uveal melanoma cell lines derived from tumors with loss of one chromosome 3. *Exp. Eye Res.* 83: 858-864.

CHROMOSOMAL LOCATION

Genetic locus: Cep19 (mouse) mapping to 16 B2.

RESEARCH USE

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

PRODUCT

1500031L02Rik 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see 1500031L02Rik shRNA Plasmid (m): sc-108244-SH and 1500031L02Rik shRNA (m) Lentiviral Particles: sc-108244-V as alternate gene silencing products.

For independent verification of 1500031L02Rik (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-108244A, sc-108244B and sc-108244C.

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

1500031L02Rik siRNA (m) is recommended for the inhibition of 1500031L02Rik 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 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 1500031L02Rik gene expression knockdown using RT-PCR Primer: 1500031L02Rik (m)-PR: sc-108244-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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