SANTA CRUZ BIOTECHNOLOGY, INC.

Fam5c siRNA (m): sc-141454

BACKGROUND

Fam5c (family with sequence similarity 5, member C), also known as B830045N13Rik, is a 766 amino acid secreted protein belonging to the FAM5 family. The gene that encodes Fam5c maps to murine chromosome 1. Mouse chromosome 1 houses over 1,500 genes, some of which encode proteins such as nuclear receptor coactivators, coatomer complex subunits, synaptotagmins and olfactory receptors. In mice, chromosome 1 is the site of several recombination hotspots, indicating that chromosome 1 may play an important role in genetic diversity. Defects in chromosome 1-localized genes are associated with a variety of conditions, including autoimmune myocarditis, lymphocyte cell death, catalepsy, infantile neuroaxonal dystrophy and lung carcinomas.

REFERENCES

1. Kelmenson, P.M., et al. 2005. A torrid zone on mouse chromosome 1 containing a cluster of recombinational hotspots. Genetics 169: 833-841.
2. Matsushima, Y., et al. 2005. A new mouse model for infantile neuroaxonal dystrophy, inad mouse, maps to mouse chromosome 1. Mamm. Genome 16: 73-78.
3. Hollander, M.C., et al. 2005. Deletion of XPC leads to lung tumors in mice and is associated with early events in human lung carcinogenesis. Proc. Natl. Acad. Sci. USA 102: 13200-13205.
4. Katayama, S., et al. 2005. Antisense transcription in the mammalian transcriptome. Science 309: 1564-1566.
5. Ligons, D.L., et al. 2008. A locus on chromosome 1 promotes susceptibility of experimental autoimmune myocarditis and lymphocyte cell death. Clin. Immunol. 130: 74-82.
6. Hofstetter, J.R., et al. 2008. Characterization of the quantitative trait locus for haloperidol-induced catalepsy on distal mouse chromosome 1. Genes Brain Behav. 7: 214-223.
7. Paigen, K., et al. 2008. The recombinational anatomy of a mouse chromosome. PLoS Genet. 4: e1000119.

CHROMOSOMAL LOCATION

Genetic locus: Fam5c (mouse) mapping to 1 F.

PRODUCT

Fam5c 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 Fam5c shRNA Plasmid (m): sc-141454-SH and Fam5c shRNA (m) Lentiviral Particles: sc-141454-V as alternate gene silencing products.

For independent verification of Fam5c (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-141454A, sc-141454B and sc-141454C.

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

Fam5c siRNA (m) is recommended for the inhibition of Fam5c 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 Fam5c gene expression knockdown using RT-PCR Primer: Fam5c (m)-PR: sc-141454-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Tanaka, K., et al. 2012. Fam5c is a soluble osteoblast differentiation factor linking muscle to bone. Biochem. Biophys. Res. Commun. 418: 134-139.

RESEARCH USE

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