SANTA CRUZ BIOTECHNOLOGY, INC.

MCF2L2 siRNA (h): sc-78088

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Ras superfamily of GTPases, which can be subdivided into the Ras, Rho/Rac, Sar, Rab, ARF and Ran subfamilies, controls multiple aspects of cell function, including cytoskeletal rearrangement, nuclear signaling and cell growth. The Ras superfamily of GTPases function as regulated switches that toggle between a biologically active GTP-bound and an inactive GDP-bound form. This activation is catalyzed by guanine nucleotide exchange factors (GEFs). MCF2L2 (MCF.2 cell line derived transforming sequence-like 2), also known as DRG, is a 1,114 amino acid protein that contains one spectrin repeat, one PH domain, one DH domain and one CRAL-TRIO domain. Expressed at high levels in brain and also present in testis and pancreas, MCF2L2 is thought to function as a GEF, catalyzing the activation of target GTPases. Variations in the gene encoding MCF2L2 may be associated with an increased susceptibility to type 2 diabetes. Multiple isoforms of MCF2L2 exist due to alternative splicing events.

REFERENCES

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2. Schmidt, A. and Hall, A. 2002. Guanine nucleotide exchange factors for Rho GTPases: turning on the switch. Genes Dev. 16: 1587-1609.
3. Erickson, J.W. and Cerione, R.A. 2004. Structural elements, mechanism, and evolutionary convergence of Rho protein-guanine nucleotide exchange factor complexes. Biochemistry 43: 837-842.
4. Ishimaru, S. and Hama, C. 2004. Guanine nucleotide exchange factors for Rho family GTPases: specific mediators for a variety of signals. Tanpakushitsu Kakusan Koso 49: 324-330.
5. Das, S.K. and Elbein, S.C. 2007. The search for type 2 diabetes susceptibility loci: the chromosome 1q story. Curr. Diab. Rep. 7: 154-164.
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CHROMOSOMAL LOCATION

Genetic locus: MCF2L2 (human) mapping to 3q27.1.

PRODUCT

MCF2L2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MCF2L2 shRNA Plasmid (h): sc-78088-SH and MCF2L2 shRNA (h) Lentiviral Particles: sc-78088-V as alternate gene silencing products.

For independent verification of MCF2L2 (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-78088A, sc-78088B and sc-78088C.

RESEARCH USE

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

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

MCF2L2 siRNA (h) is recommended for the inhibition of MCF2L2 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 MCF2L2 gene expression knockdown using RT-PCR Primer: MCF2L2 (h)-PR: sc-78088-PR (20 µl). 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.