

EF-CAB4A siRNA (m): sc-143303

BACKGROUND

EF-CAB4A (EF-hand calcium-binding domain-containing protein 4A), also known as CRACR2B (calcium release-activated calcium channel regulator 2B), is a 399 amino acid protein belonging to the EFCAB4 family. Containing two EF-hand domains, EF-CAB4A may be involved in store-operated Ca^{2+} entry (SOCE). EF-CAB4A exists as three alternatively spliced isoforms, and is encoded by a gene mapping to human chromosome 11p15.5. With approximately 135 million base pairs and 1,400 genes, chromosome 11 makes up around 4% of human genomic DNA and is considered a gene and disease association dense chromosome. Wilms' tumors, WAGR syndrome and Denys-Drash syndrome are associated with mutations of the WT1 gene. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are also associated with defects in chromosome 11.

REFERENCES

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3. Zehelein, J., et al. 2006. Skipping of Exon 1 in the KCNQ1 gene causes Jervell and Lange-Nielsen syndrome. *J. Biol. Chem.* 281: 35397-35403.
4. Taylor, T.D., et al. 2006. Human chromosome 11 DNA sequence and analysis including novel gene identification. *Nature* 440: 497-500.
5. Berger, A.C., et al. 2007. The subcellular localization of the Niemann-Pick Type C proteins depends on the adaptor complex AP-3. *J. Cell Sci.* 120: 3640-3652.
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CHROMOSOMAL LOCATION

Genetic locus: Efcab4a (mouse) mapping to 7 F5.

PRODUCT

EF-CAB4A siRNA (m) is a target-specific 19-25 nt siRNA 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 EF-CAB4A shRNA Plasmid (m): sc-143303-SH and EF-CAB4A shRNA (m) Lentiviral Particles: sc-143303-V as alternate gene silencing products.

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

EF-CAB4A siRNA (m) is recommended for the inhibition of EF-CAB4A 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 EF-CAB4A gene expression knockdown using RT-PCR Primer: EF-CAB4A (m)-PR: sc-143303-PR (20 μl). Annealing temperature for the primers should be $55-60^{\circ}\text{C}$ and the extension temperature should be $68-72^{\circ}\text{C}$.

RESEARCH USE

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