SANTA CRUZ BIOTECHNOLOGY, INC.

CELF3 siRNA (m): sc-142261

BACKGROUND

CELF3 (CUG-BP- and ETR-3-like factor 3), also known as TNRC4 (trinucleotide repeat containing 4), CAGH4 (CAG repeat protein 4), ETR-1 (ELAV-type RNA-binding protein 1), ERDA4 (expanded repeat domain protein CAG/CTG 4) or BRUNOL1 (Bruno-like protein 1), is an RNA-binding protein that belongs to the CELF/BRUNOL family of proteins. Expressed specifically in brain, CELF3 contains three RRM (RNA recognition motif) domains (two at the N-terminus and one at the C-terminus) and localizes to the nucleus and the cytoplasm. As is characteristic of the CELF/BRUNOL family, CELF3 binds specifically to muscle-specific splicing enhancer (MSE)-containing RNAs and is believed to play a role in the regulation of pre-mRNA alternative splicing. In addition, CELF3 may participate in translation and mRNA editing. Due to alternative splicing events, CELF3 exists as three isoforms.

REFERENCES

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3. Ladd, A.N., et al. 2001. The CELF family of RNA binding proteins is implicated in cell-specific and developmentally regulated alternative splicing. Mol. Cell. Biol. 21: 1285-1296.
4. Aldenhoven, J., et al. 2003. Improving the comparative map of porcine chromosome 10 with respect to human chromosomes 1, 9 and 10. Cytogenet. Genome Res. 102: 121-127.
5. Ladd, A.N., et al. 2004. CELF6, a member of the CELF family of RNA-binding proteins, regulates muscle-specific splicing enhancer-dependent alternative splicing. J. Biol. Chem. 279: 17756-17764.
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7. Chapple, J.P., et al. 2007. Expression, localization and τ exon 10 splicing activity of the brain RNA-binding protein TNRC4. Hum. Mol. Genet. 16: 2760-2769.
8. Dev, A., et al. 2007. Mice deficient for RNA-binding protein brunol1 show reduction of spermatogenesis but are fertile. Mol. Reprod. Dev. 74: 1456-1464.

CHROMOSOMAL LOCATION

Genetic locus: Celf3 (mouse) mapping to 3 F2.1.

PRODUCT

CELF3 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 CELF3 shRNA Plasmid (m): sc-142261-SH and CELF3 shRNA (m) Lentiviral Particles: sc-142261-V as alternate gene silencing 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

CELF3 siRNA (m) is recommended for the inhibition of CELF3 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 CELF3 gene expression knockdown using RT-PCR Primer: CELF3 (m)-PR: sc-142261-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

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.