SANTA CRUZ BIOTECHNOLOGY, INC.

# CELF5 siRNA (m): sc-141757

## BACKGROUND

The CELF (CUG-BP- and ETR-3-like factor) protein family consists of six RNA-binding proteins that are involved in editing and translating mRNA while regulating alternative splicing of pre-mRNA. CELF family members contain two adjacent N-terminal RRM (RNA recognition motif) domains and one C-terminal RRM domain, which are connected by an amino acid linker region of more than 160 amino acids. CELF5 (CUG-BP- and ETR-3-like factor 5), also known as Bruno-like protein 5 or BRUNOL5, is a 485 amino acid RNA-binding protein belonging to the CELF family. Localizing to nucleus and cytoplasm, CELF5 is involved in regulating alternative splicing of pre-mRNA and binds muscle-specific splicing enhancer (MSE) intronic sites near exon 5 of TNNT2 pre-mRNA. CELF5 is expressed in all regions of fetal and adult brain with little expression elsewhere. Two CELF5 isofoms are produced as a result of alternative splicing, and the gene encoding CELF5 maps to human chromosome 19p13.3.

## REFERENCES


1. Good, P.J., et al. 2000. A family of human RNA-binding proteins related to the *Drosophila* Bruno translational regulator. J. Biol. Chem. 275: 28583-28592.
2. 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.
3. 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.
4. Singh, G., et al. 2004. ETR-3 and CELF4 protein domains required for RNA binding and splicing activity *in vivo*. Nucleic Acids Res. 32: 1232-1241.
5. Han, J., et al. 2005. Identification of CELF splicing activation and repression domains *in vivo*. Nucleic Acids Res. 33: 2769-2780.
6. Barreau, C., et al. 2006. Mammalian CELF/Bruno-like RNA-binding proteins: molecular characteristics and biological functions. Biochimie 88: 515-525.
7. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 612680. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/


## CHROMOSOMAL LOCATION

Genetic locus: Celf5 (mouse) mapping to 10 C1.

## PRODUCT

CELF5 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 CELF5 shRNA Plasmid (m): sc-141757-SH and CELF5 shRNA (m) Lentiviral Particles: sc-141757-V as alternate gene silencing products.

## 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

CELF5 siRNA (m) is recommended for the inhibition of CELF5 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 CELF5 gene expression knockdown using RT-PCR Primer: CELF5 (m)-PR: sc-141757-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.