



CELF5 siRNA (h): sc-97170

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 and 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 isoforms are produced as a result of alternative splicing.

REFERENCES

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- 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.
- 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.
- 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.
- Han, J. and Cooper, T.A. 2005. Identification of CELF splicing activation and repression domains *in vivo*. *Nucleic Acids Res.* 33: 2769-2780.
- Barreau, C., et al. 2006. Mammalian CELF/Bruno-like RNA-binding proteins: molecular characteristics and biological functions. *Biochimie* 88: 515-525.

CHROMOSOMAL LOCATION

Genetic locus: CELF5 (human) mapping to 19p13.3.

PRODUCT

CELF5 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CELF5 shRNA Plasmid (h): sc-97170-SH and CELF5 shRNA (h) Lentiviral Particles: sc-97170-V as alternate gene silencing products.

For independent verification of CELF5 (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-97170A, sc-97170B and sc-97170C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

CELF5 siRNA (h) is recommended for the inhibition of CELF5 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 μ M in 66 μ l. 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 (h)-PR: sc-97170-PR (20 μ l, 407 bp). 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.