SANTA CRUZ BIOTECHNOLOGY, INC.

CREB3L2 siRNA (m): sc-72998

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The Power to Question

BACKGROUND

CREB3L2 (cAMP responsive element binding protein 3-like 2), also known as BBF2H7, is a 520 amino acid single-pass type II membrane protein that localizes to the endoplasmic reticulum and contains one bZIP domain. Expressed in a wide variety of tissues, including lung, spleen, placenta and intestine, CREB3L2 functions as a transcriptional activator that binds DNA as a dimer and is thought to act during endoplasmic reticulum stress, specifically by activating the transcription of unfolded protein response target genes. Additionally, CREB3L2 is thought to be involved in preventing the accumulation of unfolded proteins in damaged neurons, thereby playing a role in neuronal maintenance. Chromosomal rearrangements that involve the CREB3L2 gene are associated with low grade fibromyxoid sarcomas (LGFMSs). Multiple isoforms of CREB3L2 exist due to alternative splicing events.

REFERENCES

1. Bejarano, P.A., et al. 2000. Hyalinizing spindle cell tumor with giant rosettes—a soft tissue tumor with mesenchymal and neuroendocrine features. An immunohistochemical, ultrastructural, and cytogenetic analysis. Arch. Pathol. Lab. Med. 124: 1179-1184.
2. Reid, R., et al. 2003. Low-grade fibromyxoid sarcoma and hyalinizing spindle cell tumor with giant rosettes share a common t(7;16)(q34;p11) translocation. Am. J. Surg. Pathol. 27: 1229-1236.
3. Storlazzi, C.T., et al. 2003. Fusion of the FUS and BBF2H7 genes in low grade fibromyxoid sarcoma. Hum. Mol. Genet. 12: 2349-2358.
4. Panagopoulos, I., et al. 2004. The chimeric FUS/CREB3l2 gene is specific for low-grade fibromyxoid sarcoma. Genes Chromosomes Cancer 40: 218-228.
5. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608834. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: Creb3l2 (mouse) mapping to 6 B1.

PRODUCT

CREB3L2 siRNA (m) 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 CREB3L2 shRNA Plasmid (m): sc-72998-SH and CREB3L2 shRNA (m) Lentiviral Particles: sc-72998-V as alternate gene silencing products.

For independent verification of CREB3L2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-72998A, sc-72998B and sc-72998C.

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

CREB3L2 siRNA (m) is recommended for the inhibition of CREB3L2 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.

GENE EXPRESSION MONITORING

CREB3L2 (A-3): sc-515816 is recommended as a control antibody for monitoring of CREB3L2 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CREB3L2 gene expression knockdown using RT-PCR Primer: CREB3L2 (m)-PR: sc-72998-PR (20 µl, 555 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.