SANTA CRUZ BIOTECHNOLOGY, INC.

ZBTB38 siRNA (h): sc-76948

BACKGROUND

Zinc finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. ZBTB38 (zinc finger and BTB domain-containing protein 38), also known as CIBZ, is a 1,195 amino acid zinc finger protein that is highly expressed in brain tissue. Like most other zinc finger proteins, ZBTB38 is thought to function as a transcriptional activator that may specifically influence the differentiation and the survival of late postmitotic neurons. Additionally, ZBTB38 is a substrate for caspase-3 and may play an important role in the negative regulation of caspase-3-induced apoptosis. ZBTB38 contains one BTB (POZ) domain and ten C_2H_2-type zinc fingers, through which it conveys nucleic acid-binding activity.

REFERENCES

1. Evans, R.M. and Hollenberg, S.M. 1988. Zinc fingers: gilt by association. Cell 52: 1-3.
2. Rosenfeld, R. and Margalit, H. 1993. Zinc fingers: conserved properties that can distinguish between spurious and actual DNA-binding motifs. J. Biomol. Struct. Dyn. 11: 557-570.
3. Sasai, N., et al. 2005. Identification of a novel BTB-zinc finger transcriptional repressor, CIBZ, that interacts with CtBP corepressor. Genes Cells 10: 871-885.
4. Filion, G.J., et al. 2006. A family of human zinc finger proteins that bind methylated DNA and repress transcription. Mol. Cell. Biol. 26: 169-181.
5. Rozsa, F.W., et al. 2007. Differential expression profile prioritization of positional candidate glaucoma genes: the GLC1C locus. Arch. Ophthalmol. 125: 117-127.
6. Oikawa, Y., et al. 2008. Downregulation of CIBZ, a novel substrate of caspase-3, induces apoptosis. J. Biol. Chem. 283: 14242-14247.
7. Gudbjartsson, D.F., et al. 2008. Many sequence variants affecting diversity of adult human height. Nat. Genet. 40: 609-615.

CHROMOSOMAL LOCATION

Genetic locus: ZBTB38 (human) mapping to 3q23.

PRODUCT

ZBTB38 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ZBTB38 shRNA Plasmid (h): sc-76948-SH and ZBTB38 shRNA (h) Lentiviral Particles: sc-76948-V as alternate gene silencing products.

For independent verification of ZBTB38 (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-76948A, sc-76948B and sc-76948C.

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

ZBTB38 siRNA (h) is recommended for the inhibition of ZBTB38 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 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 ZBTB38 gene expression knockdown using RT-PCR Primer: ZBTB38 (h)-PR: sc-76948-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.