SANTA CRUZ BIOTECHNOLOGY, INC.

ZNF512B siRNA (h): sc-76991

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. The majority of zinc-finger proteins contain a Krüppel-type DNA binding domain and a KRAB domain, which is thought to interact with KAP1, thereby recruiting histone modifying proteins. ZNF512B (zinc finger protein 512B), also known as GM632, is an 892 amino acid protein that localizes to the nucleus and belongs to the Krüppel C_2H_2-type zinc-finger protein family. Thought to be involved in transcriptional regulation, ZNF512B contains seven C_2H_2-type zinc fingers and is encoded by a gene which maps to human chromosome 20. Comprising approximately 2% of the human genome, chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome.

REFERENCES

1. Nagase, T., et al. 1999. Prediction of the coding sequences of unidentified human genes. XV. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 6: 337-345.
2. Ville, D., et al. 2006. Early pattern of epilepsy in the ring chromosome 20 syndrome. Epilepsia 47: 543-549.
3. Blanc, P., et al. 2008. Trisomy 20q caused by interstitial duplication 20q13.2: clinical report and literature review. Am. J. Med. Genet. A 146A: 1307-1311.
4. Brayer, K.J., et al. 2008. The protein-binding potential of C_2H_2 zinc finger domains. Cell Biochem. Biophys. 51: 9-19.
5. Ding, G., et al. 2009. SysZNF: the C_2H_2 zinc finger gene database. Nucleic Acids Res. 37: D267-D273.

CHROMOSOMAL LOCATION

Genetic locus: ZNF512B (human) mapping to 20q13.33.

PRODUCT

ZNF512B 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 ZNF512B shRNA Plasmid (h): sc-76991-SH and ZNF512B shRNA (h) Lentiviral Particles: sc-76991-V as alternate gene silencing products.

For independent verification of ZNF512B (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-76991A, sc-76991B and sc-76991C.

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

ZNF512B siRNA (h) is recommended for the inhibition of ZNF512B 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 ZNF512B gene expression knockdown using RT-PCR Primer: ZNF512B (h)-PR: sc-76991-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.