

S19BP siRNA (m): sc-153192

BACKGROUND

S19BP, also known as RPS19BP1 (ribosomal protein S19 binding protein 1) or AROS, is a 136 amino acid protein that localizes to the nucleolus and belongs to the AROS family. Expressed in a variety of tissues, S19BP interacts with Ribosomal Protein S19 and SIRT1 and is thought to directly regulate SIRT1 function, specifically enhancing the SIRT1-mediated deacetylation of p53 and inhibiting p53-induced transcriptional activity. The gene encoding S19BP maps to human chromosome 22, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, Neurofibromatosis type 2, autism and schizophrenia.

REFERENCES

1. Gilbert, F. 1998. Disease genes and chromosomes: disease maps of the human genome. *Chromosome 22. Genet. Test.* 2: 89-97.
2. Schwab, S.G. and Wildenauer, D.B. 1999. Chromosome 22 workshop report. *Am. J. Med. Genet.* 88: 276-278.
3. Tsilchorozidou, T., Menko, F.H., Laloo, F., Kidd, A., De Silva, R., Thomas, H., Smith, P., Malcolmson, A., Dore, J., Madan, K., Brown, A., Yovos, J.G., Tsiligopoulos, M., Vogiatzis, N., Baser, M.E., Wallace, A.J. and Evans, D.G. 2004. Constitutional rearrangements of chromosome 22 as a cause of neurofibromatosis 2. *J. Med. Genet.* 41: 529-534.
4. Arinami, T. 2006. Analyses of the associations between the genes of 22q11 deletion syndrome and schizophrenia. *J. Hum. Genet.* 51: 1037-1045.
5. Paylor, R., Glaser, B., Mupo, A., Ataliotis, P., Spencer, C., Sobotka, A., Sparks, C., Choi, C.H., Oghalai, J., Curran, S., Murphy, K.C., Monks, S., Williams, N., O'Donovan, M.C., Owen, M.J., Scambler, P.J. and Lindsay, E. 2006. Tbx1 haploinsufficiency is linked to behavioral disorders in mice and humans: implications for 22q11 deletion syndrome. *Proc. Natl. Acad. Sci. USA* 103: 7729-7734.
6. Maeda, N., Toku, S., Kenmochi, N. and Tanaka, T. 2006. A novel nucleolar protein interacts with Ribosomal Protein S19. *Biochem. Biophys. Res. Commun.* 339: 41-46.
7. Kim, E.J., Kho, J.H., Kang, M.R. and Um, S.J. 2007. Active regulator of SIRT1 cooperates with SIRT1 and facilitates suppression of p53 activity. *Mol. Cell* 28: 277-290.
8. Hay, B.N. 2007. Deletion 22q11: spectrum of associated disorders. *Semin. Pediatr. Neurol.* 14: 136-139.
9. Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610225. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: Rps19bp1 (mouse) mapping to 15 E1.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

S19BP 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see S19BP shRNA Plasmid (m): sc-153192-SH and S19BP shRNA (m) Lentiviral Particles: sc-153192-V as alternate gene silencing 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

S19BP siRNA (m) is recommended for the inhibition of S19BP 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 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 S19BP gene expression knockdown using RT-PCR Primer: S19BP (m)-PR: sc-153192-PR (20 μ l). 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.