SANTA CRUZ BIOTECHNOLOGY, INC.

ACRC siRNA (h): sc-91258

BACKGROUND

ACRC (acidic repeat containing), also known as NAAR1, is a 691 amino acid protein belonging to the serine-aspartate repeat-containing protein (SDr) family. ACRC contains at least 12 exons and spans 35.5 kb. ACRC is ubiquitously expressed, with highest expression in skeletal muscle. Encoded by a gene that maps to the DYT3 critical region on human chromosome Xq13.1, ACRC is also expressed in skeletal muscle, liver, kidney, pancreas, heart, lung and brain. ACRC exhibits a characteristic repeat of 21 units of 8 to 10 amino acids and consists of several potential nuclear localization signals in the C terminus, as well as putative N-glycosylation and phosphorylation sites. ACRC may play a role in chromatin structure.

REFERENCES

1. Nolte, D., et al. 2001. ACRC codes for a novel nuclear protein with unusual acidic repeat tract and maps to DYT3 (dystonia parkinsonism) critical interval in Xq13.1. Neurogenetics 3: 207-213.
2. Nolte, D. and Müller, U. 2002. Human O-GlcNAc transferase (OGT): genomic structure, analysis of splice variants, fine mapping in Xq13.1. Mamm. Genome 13: 62-64.
3. Nolte, D., et al. 2003. Specific sequence changes in multiple transcript system DYT3 are associated with X-linked dystonia parkinsonism. Proc. Natl. Acad. Sci. USA 100: 10347-10352.
4. Makino, S., et al. 2007. Reduced neuron-specific expression of the TAF1 gene is associated with X-linked dystonia-parkinsonism. Am. J. Hum. Genet. 80: 393-406.
5. Zeng, Y., et al. 2009. Down-regulating cold shock protein genes impairs cancer cell survival and enhances chemosensitivity. J. Cell. Biochem. 107: 179-188.
6. Rochman, M., et al. 2009. The interaction of NSBP1/HMGN5 with nucleosomes in euchromatin counteracts linker histone-mediated chromatin compaction and modulates transcription. Mol. Cell 35: 642-656.
7. Rochman, M., et al. 2010. HMGN5/NSBP1: a new member of the HMGN protein family that affects chromatin structure and function. Biochim. Biophys. Acta 1799: 86-92.

CHROMOSOMAL LOCATION

Genetic locus: ACRC (human) mapping to Xq13.1.

PRODUCT

ACRC 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 ACRC shRNA Plasmid (h): sc-91258-SH and ACRC shRNA (h) Lentiviral Particles: sc-91258-V as alternate gene silencing products.

For independent verification of ACRC (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-91258A, sc-91258B and sc-91258C.

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

ACRC siRNA (h) is recommended for the inhibition of ACRC 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 ACRC gene expression knockdown using RT-PCR Primer: ACRC (h)-PR: sc-91258-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.

PROTOCOLS

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