SANTA CRUZ BIOTECHNOLOGY, INC.

AARSD1 siRNA (m): sc-140735

BACKGROUND

AARSD1 (alanyl-tRNA synthetase domain containing 1), also known as Alanyl-tRNA editing protein Aarsd1, is a 412 amino acid protein belonging to the class-II aminoacyl-tRNA synthetase family and the Alax-L subfamily. The structural architecture of class II tRNA synthetases can be traced to a universal common ancestor from 3.5 billion years ago. Encoded by a gene that maps to human chromosome 17q21.31, AARSD1 exhibits subcellular localization and exists as two alternatively spliced isoforms. AARSD1 participates in alanine-tRNA ligase activity, as well as ATP, metal ion, nucleic acid and nucleotide binding. In HeLa cells, AARSD1 stimulates the glucocorticoid receptor, which is a ligand-regulated transcription factor that binds glucocorticoids and regulates transcription after binding specific DNA sequences in promoters or enhancers.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Aarsd1 (mouse) mapping to 11 D.

PROTOCOLS

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

PRODUCT

AARSD1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see AARSD1 shRNA Plasmid (m): sc-140735-SH and AARSD1 shRNA (m) Lentiviral Particles: sc-140735-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 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

AARSD1 siRNA (m) is recommended for the inhibition of AARSD1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor AARSD1 gene expression knockdown using RT-PCR Primer: AARSD1 (m)-PR: sc-140735-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.