SANTA CRUZ BIOTECHNOLOGY, INC.

ATAD1 siRNA (m): sc-141314

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The Power to Question

BACKGROUND

The AAA ATPase family of molecular chaperones is characterized by a highly conserved AAA motif. Composed of 200-250 residues, the AAA domain contains Walker homology sequences and imparts ATPase activity. Members of the AAA ATPase family act as DNA helicases or transcription factors and are thought to be involved in several cellular functions, such as cell-cycle regulation, protein proteolysis, organelle biogenesis and vesicle-mediated protein transport. ATAD1 (ATPase family, AAA domain containing 1), also known as AFDC1, is a 361 amino acid protein belonging to the AAA ATPase family. Highly conserved, ATAD1 exhibits peroxisomal and mitochondrial localization, and exists as two alternatively spliced isoforms. ATAD1 may be associated with metastasis and poor survival across multiple carcinomas.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Atad1 (mouse) mapping to 19 C1.

PROTOCOLS

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

PRODUCT

ATAD1 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 ATAD1 shRNA Plasmid (m): sc-141314-SH and ATAD1 shRNA (m) Lentiviral Particles: sc-141314-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

ATAD1 siRNA (m) is recommended for the inhibition of ATAD1 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 ATAD1 gene expression knockdown using RT-PCR Primer: ATAD1 (m)-PR: sc-141314-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.