SANTA CRUZ BIOTECHNOLOGY, INC.

ATAD2B siRNA (m): sc-141316

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. ATAD2B (ATPase family AAA domain-containing protein 2B) is a 1,458 amino acid protein that contains one bromo domain and exists as two alternatively spliced isoforms. The gene encoding ATAD2B maps to human chromosome 2p24.1 and mouse chromosome 12 A1.1.

REFERENCES

1. Patel, S., et al. 1998. The AAA team: related ATPases with diverse functions. Trends Cell Biol. 8: 65-71.
2. Neuwald, A.F., et al. 1999. AAA+: A class of chaperone-like ATPases associated with the assembly, operation, and disassembly of protein complexes. Genome Res. 9: 27-43.
3. Ogura, T., et al. 2001. AAA+ superfamily ATPases: common structure—diverse function. Genes Cells 6: 575-597.
4. Ye, Y., et al. 2001. The AAA ATPase Cdc48/p97 and its partners transport proteins from the ER into the cytosol. Nature 414: 652-656.
5. Iyer, L.M., et al. 2004. Evolutionary history and higher order classification of AAA+ ATPases. J. Struct. Biol. 146: 11-31.
6. Kedzierska, S. 2006. Structure, function and mechanisms of action of ATPases from the AAA superfamily of proteins. Postepy Biochem. 52: 330-338.
7. Gauci, S., et al. 2009. Lys-N and trypsin cover complementary parts of the phosphoproteome in a refined SCX-based approach. Anal. Chem. 81: 4493-4501.

CHROMOSOMAL LOCATION

Genetic locus: Atad2b (mouse) mapping to 12 A1.1.

PRODUCT

ATAD2B 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 ATAD2B shRNA Plasmid (m): sc-141316-SH and ATAD2B shRNA (m) Lentiviral Particles: sc-141316-V as alternate gene silencing products.

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.

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

ATAD2B siRNA (m) is recommended for the inhibition of ATAD2B 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 ATAD2B gene expression knockdown using RT-PCR Primer: ATAD2B (m)-PR: sc-141316-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.