SANTA CRUZ BIOTECHNOLOGY, INC.

ATP5J2 siRNA (m): sc-141353

BACKGROUND

Mitochondrial ATP synthase catalyzes ATP synthesis, utilizing an electrochemical gradient of protons across the inner membrane during oxidative phosphorylation. It is composed of two linked multi-subunit complexes: the soluble catalytic core, F_1, and the membrane-spanning component, F_0, which comprises the proton channel. ATP5J2, also know as ATP synthase subunit f, mitochondrial, is a 94 amino acid mitochondrion inner membrane that belongs to the ATPase F chain family. Mitochondrial dysfunction is prominent in Alzheimer's disease (AD). A failure of one or more of the mitochondrial electron transport chain enzymes, or of F_1F_0-ATPase (ATP synthase), could compromise brain energy stores, generate damaging reactive oxygen species (ROS), and lead to neuronal death. Existing as two alternatively spliced isoforms, the ATP5J2 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken and zebrafish, and maps to human chromosome 7q22.1.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Atp5j2 (mouse) mapping to 5 G2.

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.

PRODUCT

ATP5J2 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 ATP5J2 shRNA Plasmid (m): sc-141353-SH and ATP5J2 shRNA (m) Lentiviral Particles: sc-141353-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

ATP5J2 siRNA (m) is recommended for the inhibition of ATP5J2 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.