SANTA CRUZ BIOTECHNOLOGY, INC.

ATP5E siRNA (m): sc-60230

BACKGROUND

Mitochondrial ATP synthases (ATPases) transduce the energy contained in membrane electrochemical proton gradients into the energy required for synthesis of high-energy phosphate bonds. ATPases contain two linked complexes: F_1, the hydrophilic catalytic core; and F_0, the membrane-embedded protein channel. F_1 consists of three α chains and three β chains, which are weakly homologous, as well as one γ chain, one δ chain and one ε chain. F_0 consists of three subunits: a, b and c. The ε chain of F_1 contains 50 amino acids and is the smallest of the 5 ATPase F_1 chains. Mitochondrial ATPase ε chain (ATP5E) localizes to the mitochondria and catalyzes ATP synthesis.

REFERENCES

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2. Shirakihara, Y., Leslie, A.G., Abrahams, J.P., Walker, J.E., Ueda, T., Sekimoto, Y., Kambara, M., Saika, K., Kagawa, Y. and Yoshida, M. 1997. The crystal structure of the nucleotide-free $\alpha 3/\beta 3$ subcomplex of F_1-ATPase from the thermophilic *Bacillus* PS3 is a symmetric trimer. Structure 5: 825-836.
3. Tu, Q., Yu, L., Zhang, P., Zhang, M., Zhang, H., Jiang, J., Chen, C. and Zhao, S. 2000. Cloning, characterization and mapping of the human ATP5E gene, identification of pseudogene ATP5EP1 and definition of the ATP5E motif. Biochem. J. 347: 17-21.
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CHROMOSOMAL LOCATION

Genetic locus: Atp5e (mouse) mapping to 2 H4.

PRODUCT

ATP5E siRNA (m) 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 ATP5E shRNA Plasmid (m): sc-60230-SH and ATP5E shRNA (m) Lentiviral Particles: sc-60230-V as alternate gene silencing products.

For independent verification of ATP5E (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-60230A, sc-60230B and sc-60230C.

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

ATP5E siRNA (m) is recommended for the inhibition of ATP5E 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.

RESEARCH USE

For research use only, not for use in diagnostic procedures.