

ATP6V0E1 siRNA (m): sc-141360

BACKGROUND

Vacuolar-type H⁺-ATPase (V-ATPase) is a multisubunit enzyme responsible for acidification of eukaryotic intracellular organelles. ATP6V0E1, also known as V-type proton ATPase subunit E1 or ATP6H, is an 81 amino acid multi-pass membrane protein that is ubiquitously expressed and belongs to the V-ATPase E subunit family. ATP6V0E1 contains a conserved sequence motif, CSVCC, which is similar to those of metal-binding proteins, and is associated with copper and iron transport in yeast and may be a candidate gene for copper toxicosis (CT). ATP6V0E1 is composed of at least ten subunits. The ATP6V0E1 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken and zebrafish, and maps to human chromosome 5q35.2. With 181 million base pairs encoding around 1,000 genes, chromosome 5 consists of about 6% of human genomic DNA. Chromosome 6 is associated with Cockayne syndrome through the ERCC8 gene and familial adenomatous polyposis through the adenomatous polyposis coli (APC) tumor suppressor gene.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Atp6v0e (mouse) mapping to 17 A3.3.

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

ATP6V0E1 siRNA (m) is a pool of 2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ATP6V0E1 shRNA Plasmid (m): sc-141360-SH and ATP6V0E1 shRNA (m) Lentiviral Particles: sc-141360-V as alternate gene silencing products.

For independent verification of ATP6V0E1 (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-141360A and sc-141360B.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

ATP6V0E1 siRNA (m) is recommended for the inhibition of ATP6V0E1 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 μ M in 66 μ l. 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 ATP6V0E1 gene expression knockdown using RT-PCR Primer: ATP6V0E1 (m)-PR: sc-141360-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.