SANTA CRUZ BIOTECHNOLOGY, INC.

AREBP siRNA (h): sc-88659

BACKGROUND

AREBP (AICAR responsive element binding protein), also known as ZNF692 (zinc finger protein 692), is a 519 amino acid protein that belongs to the Krüppel C_2H_2-type zinc-finger protein family. Encoded by a gene that maps to human chromosome 1q44, AREBP contains five C_2H_2-type zinc fingers, exists as four alternatively spliced isoforms and localizes to nucleus. Conserved in chimpanzee, bovine, mouse, rat and zebrafish, AREBP participates in DNA binding, as well as metal and zinc ion binding. Phosphorylated by AMPK, the DNA-binding activity of AREBP is reduced, whereby repressing gene expression of PEPCK (phosphoenolpyruvate carboxykinasea), a key enzyme that participates in gluconeogenesis. AREBP reduction also diminishes AMPK-induced PEPCK down-regulation, suggesting AREBP is a novel key modulator of PEPCK gene expression. AREBP may also be involved in transcriptional regulation activities.

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CHROMOSOMAL LOCATION

Genetic locus: ZNF692 (human) mapping to 1q44.

PRODUCT

AREBP siRNA (h) 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 AREBP shRNA Plasmid (h): sc-88659-SH and AREBP shRNA (h) Lentiviral Particles: sc-88659-V as alternate gene silencing products.

For independent verification of AREBP (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-88659A, sc-88659B and sc-88659C.

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

AREBP siRNA (h) is recommended for the inhibition of AREBP expression in human 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 AREBP gene expression knockdown using RT-PCR Primer: AREBP (h)-PR: sc-88659-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.

PROTOCOLS

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