SANTA CRUZ BIOTECHNOLOGY, INC.

AE4 siRNA (m): sc-140890

BACKGROUND

AE4 (anion exchanger 4), also known as SLC4A9 (solute carrier family 4, sodium bicarbonate cotransporter, member 9) or sodium bicarbonate cotransporter 5, is a 983 amino acid multi-pass membrane protein belonging to the anion exchanger family. Encoded by a gene that maps to human chromosome 5q31.3, AE4 is expressed in kidney, testis and pancreas, and localizes in both luminal and basolateral membranes. AE4 contains 23 exons, 14 transmembrane domains, intracellular N and C termini, an N-terminal leucine zipper motif, multiple intracellular phosphorylation sites and 2 extracellular N-glycosylation sites. AE4 exists as three alternatively spliced isoforms and functions as a Cl^--HCO_3^- exchanger. AE4 may play a role in regulating intracellular and airway surface liquid pH in mucociliary epithelium *in vivo*.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Slc4a9 (mouse) mapping to 18 B2.

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

AE4 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 AE4 shRNA Plasmid (m): sc-140890-SH and AE4 shRNA (m) Lentiviral Particles: sc-140890-V as alternate gene silencing products.

For independent verification of AE4 (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-140890A, sc-140890B and sc-140890C.

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

AE4 siRNA (m) is recommended for the inhibition of AE4 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 AE4 gene expression knockdown using RT-PCR Primer: AE4 (m)-PR: sc-140890-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.