

AKAP 2 siRNA (m): sc-140976

BACKGROUND

The type II cAMP-protein kinase (PKA) is a multifunctional kinase with a broad range of substrates. Specificity of PKA signaling is thought to be mediated by the compartmentalization of the kinase to specific sites within the cell. To maintain this specific localization, the regulatory (R) subunits (RI and RII) of PKA interact with specific R-anchoring proteins designated AKAPs (A-kinase anchoring proteins). AKAP 2 (protein kinase A-anchoring protein 2), also known as PALM2, PRKA2 or AKAPKL, is a 859 amino acid protein that is expressed as six alternatively spliced isoforms found in heart, fibroblasts, skeletal muscle, epithelial cells of kidney and lung, with moderate levels found in cerebellum and thymus. AKAP 2 associates with F-Actin and accumulates in regions of the cortical cytoskeleton. The gene encoding AKAP 2 maps to human chromosome 9q31.3 and mouse chromosome 4 B3.

REFERENCES

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4. Hu, B., et al. 2001. The paralemmin protein family: identification of paralemmin-2, an isoform differentially spliced to AKAP 2/AKAP-KL, and of palmdelphin, a more distant cytosolic relative. *Biochem. Biophys. Res. Commun.* 285: 1369-1376.
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CHROMOSOMAL LOCATION

Genetic locus: Akap2 (mouse) mapping to 4 B3.

PRODUCT

AKAP 2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see AKAP 2 shRNA Plasmid (m): sc-140976-SH and AKAP 2 shRNA (m) Lentiviral Particles: sc-140976-V as alternate gene silencing products.

For independent verification of AKAP 2 (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-140976A, sc-140976B and sc-140976C.

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

AKAP 2 siRNA (m) is recommended for the inhibition of AKAP 2 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 AKAP 2 gene expression knockdown using RT-PCR Primer: AKAP 2 (m)-PR: sc-140976-PR (20 μ l, 572 bp). 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.