SANTA CRUZ BIOTECHNOLOGY, INC.

ADCK4 siRNA (m): sc-140876

BACKGROUND

ADCK4 (aarF domain containing kinase 4) is a 544 amino acid single-pass membrane protein belonging to the protein kinase superfamily and the ADCK protein kinase family. The ADCK family consists of five paralogs in human (ADCK1-5). ADCK4 is very similar to ADCK3, with both possibly resulting from a gene duplication in vertebrates. Encoded by a gene that maps to human chromosome 19q13.2, ADCK4 contains one protein kinase domain and exists as two alternatively spliced isoforms. ADCK4 participates in kinase functions, protein serine/threonine kinase activities and transferase roles. ADCK4 may be involved in regulation of CoQ10 synthesis and likely demonstrates cancer-specific immunological responses.

REFERENCES

1. Lagier-Tourenne, C., et al. 2008. ADCK3, an ancestral kinase, is mutated in a form of recessive ataxia associated with coenzyme Q10 deficiency. Am. J. Hum. Genet. 82: 661-672.
2. Bamborough, P., et al. 2008. Assessment of chemical coverage of kinome space and its implications for kinase drug discovery. J. Med. Chem. 51: 7898-7914.
3. Simpson, K.J., et al. 2008. Identification of genes that regulate epithelial cell migration using an siRNA screening approach. Nat. Cell Biol. 10: 1027-1038.
4. Onouchi, Y., et al. 2008. ITPKC functional polymorphism associated with Kawasaki disease susceptibility and formation of coronary artery aneurysms. Nat. Genet. 40: 35-42.
5. Geng, L., et al. 2008. Identification of metastasis associated antigen 1 (MTA1) by serological screening of prostate cancer cDNA libraries. Open Biochem. J. 2: 100-107.
6. Hata, A. and Onouchi, Y. 2009. Susceptibility genes for Kawasaki disease: toward implementation of personalized medicine. J. Hum. Genet. 54: 67-73.
7. Baldwin, A., et al. 2010. Kinase requirements in human cells: V. Synthetic lethal interactions between p53 and the protein kinases SGK2 and PAK3. Proc. Natl. Acad. Sci. USA 107: 12463-12468.

CHROMOSOMAL LOCATION

Genetic locus: Adck4 (mouse) mapping to 7 A3.

PRODUCT

ADCK4 siRNA (m) is a target-specific 19-25 nt siRNA 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 ADCK4 shRNA Plasmid (m): sc-140876-SH and ADCK4 shRNA (m) Lentiviral Particles: sc-140876-V as alternate gene silencing products.

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

ADCK4 siRNA (m) is recommended for the inhibition of ADCK4 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 ADCK4 gene expression knockdown using RT-PCR Primer: ADCK4 (m)-PR: sc-140876-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.