



SH2D4A siRNA (m): sc-153429

BACKGROUND

SH2D4A (SH2 domain containing protein 4A), also known as SH2A, is a ubiquitously expressed 454 amino acid docking protein that belongs to the SH2 signaling protein family. Members of this family typically participate in intracellular signaling. Localizing to the cytoplasm, SH2D4A contains one Src homology 2 (SH2) domain. SH2 domains bind to tyrosine-phosphorylated regions of target proteins, frequently linking activated growth factors to putative signal transduction proteins. This suggests that SH2D4A, via its SH2 domain, may play an important function in cellular signal transduction. More specifically, SH2D4A is believed to function as an inhibiting factor in PKC signal transduction. In addition, SH2D4A exhibits abnormal expression in various cancers, implying that it may be involved in tumorigenesis.

REFERENCES

1. Dai, S., Zhao, Y. and Ding, Q. 2002. A novel member of SH(2) signaling protein family: cloning and characterization of SH(2)A gene. *Zhonghua Yi Xue Yi Chuan Xue Za Zhi* 19: 458-462.
2. Ding, Q., Zhao, Y.Y., Sun, Z.J. and Yu, D.H. 2003. Effect of SH2A gene in cell signal transduction and its subcellular localization. *Zhonghua Yi Xue Yi Chuan Xue Za Zhi* 20: 499-503.
3. Patrakka, J., Xiao, Z., Nukui, M., Takemoto, M., He, L., Oddsson, A., Perisic, L., Kaukinen, A., Szgyarto, C.A., Uhlen, M., Jalanko, H., Betsholtz, C. and Tryggvason, K. 2007. Expression and subcellular distribution of novel glomerulus-associated proteins dendrin, EHD3, SH2D4A, PLEKHH2, and 231006E14Rik. *J. Am. Soc. Nephrol.* 18: 689-697.
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CHROMOSOMAL LOCATION

Genetic locus: Sh2d4a (mouse) mapping to 8 B3.3.

PRODUCT

SH2D4A 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SH2D4A shRNA Plasmid (m): sc-153429-SH and SH2D4A shRNA (m) Lentiviral Particles: sc-153429-V as alternate gene silencing 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 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.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

SH2D4A siRNA (m) is recommended for the inhibition of SH2D4A 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 SH2D4A gene expression knockdown using RT-PCR Primer: SH2D4A (m)-PR: sc-153429-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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