SANTA CRUZ BIOTECHNOLOGY, INC.

Clik1 siRNA (h): sc-72921

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The Power to Question

BACKGROUND

Clik1 (CLP36 interacting kinase), also known as STK35 (serine/threonine-protein kinase 35) or PDIK1 (PDLIM1-interacting kinase 1), is a 401 amino acid protein that belongs to the protein kinase superfamily. Localized predominately to the nucleus, Clik1 is expressed in the liver, kidney, pancreas, spleen, thymus, prostate and testis. However, coexpression with CLP36 causes relocalization of nuclear Clik1 to the cytoplasm and into actin stress fibers. Actin stress fibers form a dynamic organelle that is important in processes involving cell shape; such as cell migration, cell polarity and cytokinesis. It is suggested that Clik1 may be a novel regulator of the actomyosin cytoskeleton in nonmuscle cells.

REFERENCES

1. Bauer, K., et al. 2000. Human CLP36, a PDZ-domain and LIM-domain protein, binds to α-actinin-1 and associates with Actin filaments and stress fibers in activated platelets and endothelial cells. Blood 96: 4236-4245.
2. Vallenius, T., et al. 2000. CLP-36 PDZ-LIM protein associates with nonmuscle α-actinin-1 and α-actinin-4. J. Biol. Chem. 275: 11100-11105.
3. Vallenius, T., et al. 2002. Clik1: a novel kinase targeted to Actin stress fibers by the CLP-36 PDZ-LIM protein. J. Cell Sci. 115: 2067-2073.
4. Khurana, T., et al. 2002. LIM proteins: association with the Actin cytoskeleton. Protoplasma 219: 1-12.
5. Guo, L., et al. 2003. Molecular cloning and characterization of a novel human kinase gene, PDIK1L. J. Genet. 82: 27-32.
6. Vallenius, T., et al. 2004. The PDZ-LIM protein RIL modulates actin stress fiber turnover and enhances the association of α-actinin with F-Actin. Exp. Cell Res. 293: 117-128.
7. te Velthuis, A.J., et al. 2007. PDZ and LIM domain-encoding genes: molecular interactions and their role in development. ScientificWorldJournal 7: 1470-1492.

CHROMOSOMAL LOCATION

Genetic locus: STK35 (human) mapping to 20p13.

PRODUCT

Clik1 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 Clik1 shRNA Plasmid (h): sc-72921-SH and Clik1 shRNA (h) Lentiviral Particles: sc-72921-V as alternate gene silencing products.

For independent verification of Clik1 (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-72921A, sc-72921B and sc-72921C.

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

Clik1 siRNA (h) is recommended for the inhibition of Clik1 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 Clik1 gene expression knockdown using RT-PCR Primer: Clik1 (h)-PR: sc-72921-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.