SANTA CRUZ BIOTECHNOLOGY, INC.

DOCK 5 siRNA (m): sc-143135

BACKGROUND

DOCK 5 (dedicator of cytokinesis protein 5) is a 1,870 amino acid protein belonging to the DOCK family of cytokinesis-regulating proteins. This cytoplasmic peripheral membrane protein activates Rac 1 and Rac 2 small GTPases, while presumably acting as a guanine nucleotide exchange factor (GEF), which exchanges bound GDP for free GTP. DOCK 5 contains one DHR-1 (CZH-1) domain, one DHR-2 (CZH-2) domain and one SH3 domain. The DHR-2 domain is a putative GEF activity mediator. In mice, spontaneous mutation of the gene encoding DOCK 5 leads to deletion of the DHR-1 domain, which functions to bind phospholipids and assists in protein-protein interactions, resulting in rupture of lens cataract (RLC). Due to siRNA knockdown studies, it is suspected that DOCK 5 may also be an important mediator of CrkII/CrkL regulation of Caco-2 migration and spreading on COL4. There are two isoforms of DOCK 5 that exist as a result of alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Dock5 (mouse) mapping to 14 D1.

PROTOCOLS

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

PRODUCT

DOCK 5 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 DOCK 5 shRNA Plasmid (m): sc-143135-SH and DOCK 5 shRNA (m) Lentiviral Particles: sc-143135-V as alternate gene silencing products.

For independent verification of DOCK 5 (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-143135A, sc-143135B and sc-143135C.

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

DOCK 5 siRNA (m) is recommended for the inhibition of DOCK 5 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 DOCK 5 gene expression knockdown using RT-PCR Primer: DOCK 5 (m)-PR: sc-143135-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.