SANTA CRUZ BIOTECHNOLOGY, INC.

Dok-5 siRNA (m): sc-143139

BACKGROUND

The downstream of kinase family (Dok-1-7) are members of a class of "docking" proteins that include the tyrosine kinase substrates IRS-1 and Cas, which contain multiple tyrosine residues and putative SH2 binding sites. Dok-4 and Dok-5 are more similar to each other than to the other Dok family members, and may constitute a subfamily of the DOK genes. Dok-5 is a tyrosine kinase substrate that enhances c-Ret-dependent activation of mitogen-activated protein kinase (MAPK). Dok-5 transcript is abundant in muscle and increases during T cell activation. Dok-5 protein undergoes tyrosine phosphorylation in response to Insulin and Insulin-like growth factor-1. The gene encoding human Dok-5 maps to chromosomal location 20q13.2.

REFERENCES

1. Grimm, J., et al. 2001. Novel p62dok family members, dok-4 and dok-5, are substrates of the c-Ret receptor tyrosine kinase and mediate neuronal differentiation. J. Cell Biol. 154: 345-354.
2. Shi, N., et al. 2002. Expression, crystallization and preliminary X-ray studies of the recombinant PTB domain of human dok-5 protein. Acta Crystallogr. D Biol. Crystallogr. 58: 2170-2172.
3. Cai, D., et al. 2003. Two new substrates in Insulin signaling, IRS5/DOK4 and IRS6/DOK5. J. Biol. Chem. 278: 25323-25330.
4. Favre, C., et al. 2003. DOK4 and DOK5: new Dok-related genes expressed in human T cells. Genes Immun. 4: 40-45.
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6. Zhang, Y., et al. 2004. Molecular basis of distinct interactions between Dok1 PTB domain and tyrosine-phosphorylated EGF receptor. J. Mol. Biol. 343: 1147-1155.
7. LocusLink Report (LocusID: 55715). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: Dok5 (mouse) mapping to 2 H3.

PRODUCT

Dok-5 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 Dok-5 shRNA Plasmid (m): sc-143139-SH and Dok-5 shRNA (m) Lentiviral Particles: sc-143139-V as alternate gene silencing products.

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.

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

Dok-5 siRNA (m) is recommended for the inhibition of Dok-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 Dok-5 gene expression knockdown using RT-PCR Primer: Dok-5 (m)-PR: sc-143139-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.