SANTA CRUZ BIOTECHNOLOGY, INC.

Dok-6 siRNA (h): sc-60547

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, Dok-5 and Dok-6 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. Dok-6 is highly expressed in the developing central nervous system. It associates with Ret to transduce Ret-mediated processes such as axonal projection.

REFERENCES

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3. Cai, D., et al. 2003. Two new substrates in Insulin signaling, IRS-5/Dok-4 and IRS-6/Dok-5. J. Biol. Chem. 278: 25323-25330.
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7. Crowder, R.J., et al. 2004. Dok-6, a novel p62 Dok family member, promotes Ret-mediated neurite outgrowth. J. Biol. Chem. 279: 42072-42081.
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CHROMOSOMAL LOCATION

Genetic locus: DOK6 (human) mapping to 18q22.2.

PRODUCT

Dok-6 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 Dok-6 shRNA Plasmid (h): sc-60547-SH and Dok-6 shRNA (h) Lentiviral Particles: sc-60547-V as alternate gene silencing products.

For independent verification of Dok-6 (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-60547A, sc-60547B and sc-60547C.

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-6 siRNA (h) is recommended for the inhibition of Dok-6 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 Dok-6 gene expression knockdown using RT-PCR Primer: Dok-6 (h)-PR: sc-60547-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.

PROTOCOLS

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