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Shc4 siRNA (m): sc-153445

BACKGROUND

Src homology (SH2) domains are noncatalytic sequences that are conserved among a number of cytoplasmic signaling proteins. These signaling proteins are directly regulated by receptor tyrosine kinases and control the activation of mitogenic signal transduction pathways by such receptors. Shc4 (SHC (Src homology 2 domain containing) family, member 4), also known as RaLP (Rai-like protein) or SHCD (SHC-transforming protein D), is a 630 amino acid protein that contains one SH2 domain and a PID domain. Localizing to the post-synaptic cell membrane, Shc4 activates Ras-dependent and Ras-independent migratory pathways in melanomas, where it is exclusively expressed. Shc4 assists in the phosphorylation of AChR β 1 and has been found to interact with phosphorylated MuSK via its NPXY domain. Shc4 exists as two alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 15q21.1.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Shc4 (mouse) mapping to 2 F1.

PROTOCOLS

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

PRODUCT

Shc4 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Shc4 shRNA Plasmid (m): sc-153445-SH and Shc4 shRNA (m) Lentiviral Particles: sc-153445-V as alternate gene silencing products.

For independent verification of Shc4 (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-153445A, sc-153445B and sc-153445C.

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.

APPLICATIONS

Shc4 siRNA (m) is recommended for the inhibition of Shc4 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 Shc4 gene expression knockdown using RT-PCR Primer: Shc4 (m)-PR: sc-153445-PR (20 μ l). 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.