SANTA CRUZ BIOTECHNOLOGY, INC.

FRS3 siRNA (m): sc-145250

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The Power to Question

BACKGROUND

FRS3 (fibroblast growth factor receptor substrate 3), also known as FRS2B (FRS2-β), is a 492 amino acid lipid-anchor adapter protein that contains one IRS-type PTB domain. Colocalizing to neural tissues with Tuj1, FRS3 functions as a feedback inhibitor of EGFR family members by preventing heterodimer formation between EGFR and ErbB2, thereby acting as a potential tumor suppressor. FRS3 is phosphorylated upon stimulation by FGF-2 or NGF and, acting as an adapter protein, links c-Fgr and NGF receptors to downstream signaling pathways. Interfering with the phosphorylation and nuclear translocation of ERK-2, FRS3 down-regulates ERK-2 expression. FRS3 likely interacts directly with GRB2, SH-PTP2, Flg, and Trk A, and may be involved in MAP kinase activation.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Frs3 (mouse) mapping to 17 C.

PRODUCT

FRS3 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 FRS3 shRNA Plasmid (m): sc-145250-SH and FRS3 shRNA (m) Lentiviral Particles: sc-145250-V as alternate gene silencing products.

For independent verification of FRS3 (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-145250A, sc-145250B and sc-145250C.

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

FRS3 siRNA (m) is recommended for the inhibition of FRS3 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 FRS3 gene expression knockdown using RT-PCR Primer: FRS3 (m)-PR: sc-145250-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.