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FARSLB siRNA (m): sc-145074

BACKGROUND

Aminoacyl-tRNA synthetases are a class of enzymes that add specific amino acid residues to various tRNAs. FARSLB (Phenylalanine—tRNA ligase β chain), also known as FARSB, FRSB, PheHB or PheRS, is a 589 amino acid cytoplasmic protein that is the regulatory beta subunit of phenylalanine-tRNA synthetase. A highly conserved member of the aminoacyl-tRNA synthetase class IIc subfamily, FARSLB functions to enzymatically attach L-phenylalanine residues to terminal adenosines on tRNA(Phe). This is an ATP-dependent reaction that yields AMP, a diphosphate and an L-phenylalanine-tagged tRNA(Phe). FARSLB is expressed in brain, heart, kidney, pancreas, placenta and skeletal muscle and its expression is increased in malignant cell lines, suggesting a possible role for FARSLB in carcinogenesis.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Farsb (mouse) mapping to 1 C4.

PROTOCOLS

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

PRODUCT

FARSLB 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see FARSLB shRNA Plasmid (m): sc-145074-SH and FARSLB shRNA (m) Lentiviral Particles: sc-145074-V as alternate gene silencing 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 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

FARSLB siRNA (m) is recommended for the inhibition of FARSLB 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 FARSLB gene expression knockdown using RT-PCR Primer: FARSLB (m)-PR: sc-145074-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.