SANTA CRUZ BIOTECHNOLOGY, INC.

Ribosomal Protein S16 siRNA (m): sc-152937

BACKGROUND

Ribosomes, the organelles that catalyze protein synthesis, are composed of a small subunit (40S) and a large subunit (60S) that consist of over 80 distinct ribosomal proteins. Ribosomal Protein S16, also known as RPS16, is a 146 amino acid cytoplasmic protein that belongs to the S9P ribosomal protein family. One of several components of the 40S subunit, Ribosomal Protein S16 may play a role in ribosome assembly and translation initiation. Elevated levels of Ribosomal Protein S16 may be associated with pancreatic and breast cancer, suggesting a possible role for Ribosomal Protein S16 in tumorigenesis. Like other mammalian ribosomal proteins, Ribosomal Protein S16 exists as multiple processed pseudogenes that are found throughout the genome.

REFERENCES

1. Batra, S.K., et al. 1991. Molecular cloning and sequence analysis of the human ribosomal protein S16. J. Biol. Chem. 266: 6830-6833.
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4. Kenmochi, N., et al. 1998. A map of 75 human ribosomal protein genes. Genome Res. 8: 509-523.
5. Yoshihama, M., et al. 2002. The human ribosomal protein genes: sequencing and comparative analysis of 73 genes. Genome Res. 12: 379-390.
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9. Ian'shina, D.D., et al. 2007. Binding of human Ribosomal Protein S16 with the 18S rRNA fragment 1203-1236/1521-1698. Mol. Biol. 41: 1023-1030.

CHROMOSOMAL LOCATION

Genetic locus: Rps16 (mouse) mapping to 7 A3.

PRODUCT

Ribosomal Protein S16 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 Ribosomal Protein S16 shRNA Plasmid (m): sc-152937-SH and Ribosomal Protein S16 shRNA (m) Lentiviral Particles: sc-152937-V as alternate gene silencing products.

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

Ribosomal Protein S16 siRNA (m) is recommended for the inhibition of Ribosomal Protein S16 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.

GENE EXPRESSION MONITORING

Ribosomal Protein S16 (D-8): sc-518206 is recommended as a control antibody for monitoring of Ribosomal Protein S16 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Ribosomal Protein S16 gene expression knockdown using RT-PCR Primer: Ribosomal Protein S16 (m)-PR: sc-152937-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.