SANTA CRUZ BIOTECHNOLOGY, INC.

Ribosomal Protein S15 siRNA (h): sc-97539

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. Mammalian ribosomal proteins are encoded by multigene families that contain processed pseudogenes and one functional intron-containing gene within their coding regions. Ribosomal Protein S15 (RPS15, RIG) is a 145 amino acid protein which belongs to the ribosomal protein S19P family and localizes to cytoplasm. The gene encoding Ribosomal Protein S15 encodes a ribosomal protein that is part of the 40S subunit and maps to human chromosome 19p13.3. The Ribosomal Protein S15 gene has been found in tumors such as Insulinomas and esophageal and colon cancers. Like most ribosomal proteins, Ribosomal Protein S15 exists as multiple processed pseudogenes that are scattered throughout the genome.

REFERENCES

1. Inoue, C., et al. 1987. Evolutionary conservation of the Insulinoma gene rig and its possible function. Proc. Natl. Acad. Sci. USA 84: 6659-6662.
2. Shiga, K., et al. 1990. Isolation and characterization of the human homologue of rig and its pseudogenes: the functional gene has features characteristic of housekeeping genes. Proc. Natl. Acad. Sci. USA 87: 3594-3598.
3. Kitagawa, M., et al. 1991. rig encodes ribosomal protein S15. The primary structure of mammalian ribosomal protein S15. FEBS Lett. 283: 210-214.
4. Kenmochi, N., et al. 1998. A map of 75 human ribosomal protein genes. Genome Res. 8: 509-523.
5. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 180535. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: RPS15 (human) mapping to 19p13.3.

PRODUCT

Ribosomal Protein S15 siRNA (h) 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 S15 shRNA Plasmid (h): sc-97539-SH and Ribosomal Protein S15 shRNA (h) Lentiviral Particles: sc-97539-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 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 S15 siRNA (h) is recommended for the inhibition of Ribosomal Protein S15 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 Ribosomal Protein S15 gene expression knockdown using RT-PCR Primer: Ribosomal Protein S15 (h)-PR: sc-97539-PR (20 µl, 500 bp). 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.