SANTA CRUZ BIOTECHNOLOGY, INC.

Ribosomal Protein S27L siRNA (m): sc-152947

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 multi-gene families that contain processed pseudogenes and one functional intron-containing gene within their coding regions. Ribosomal Protein S27L is an 84 amino acid protein that shares 96% similarity with Ribosomal Protein S27. Due to this homology, Ribosomal Protein S27L is believed to function as a component of the 40S subunit. Localized to the cytoplasm and binding one zinc ion, Ribosomal Protein S27L belongs to the S27e family of ribosomal proteins. In addition, the gene encoding Ribosomal Protein S27L is p53-inducible and its overexpression promotes apoptosis. The silencing of Ribosomal Protein S27L inhibits apoptosis, suggesting that Ribosomal Protein S27L may contribute to p53-induced apoptosis.

REFERENCES

1. Zhang, Q.H., et al. 2000. Cloning and functional analysis of cDNAs with open reading frames for 300 previously undefined genes expressed in $CD34^+$ hematopoietic stem/progenitor cells. Genome Res. 10: 1546-1560.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 612055. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Bouwmeester, T., et al. 2004. A physical and functional map of the human TNFα/NFκB signal transduction pathway. Nat. Cell Biol. 6: 97-105.
4. Li, J., et al. 2007. Ribosomal protein S27-like, a p53-inducible modulator of cell fate in response to genotoxic stress. Cancer Res. 67: 11317-11326.
5. He, H. and Sun, Y. 2007. Ribosomal protein S27L is a direct p53 target that regulates apoptosis. Oncogene 26: 2707-2716.

CHROMOSOMAL LOCATION

Genetic locus: Rps27l (mouse) mapping to 9 C.

PRODUCT

Ribosomal Protein S27L siRNA (m) is a pool of 2 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 Ribosomal Protein S27L shRNA Plasmid (m): sc-152947-SH and Ribosomal Protein S27L shRNA (m) Lentiviral Particles: sc-152947-V as alternate gene silencing products.

For independent verification of Ribosomal Protein S27L (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-152947A and sc-152947B.

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 S27L siRNA (m) is recommended for the inhibition of Ribosomal Protein S27L 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.

RESEARCH USE

For research use only, not for use in diagnostic procedures.