

Ribosomal Protein L37a siRNA (m): sc-152920

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 L37a, also known as RPL37a, is a 92 amino acid protein that localizes to the cytoplasm and exists as a component of the 60S subunit, possibly playing a role in protein translation. Like most ribosomal proteins, Ribosomal Protein L37a exists as multiple processed pseudogenes that are scattered throughout the genome. The gene encoding Ribosomal Protein L31 maps to human chromosome 2, which consists of 237 million bases encoding over 1,400 genes and making up approximately 8% of the human genome.

REFERENCES

1. Genuario, R.R., Kelley, D.E. and Perry, R.P. 1993. Comparative utilization of transcription factor GABP by the promoters of ribosomal protein genes RPL30 and RPL32. *Gene Expr.* 3: 279-288.
2. Curci, D., Glibeti, M., Larson, D.E. and Sells, B.H. 1997. GA-binding protein is involved in altered expression of Ribosomal Protein L32 gene. *J. Cell. Biochem.* 65: 287-307.
3. Orlov, S.V., Kuteikin, K.B., Dizhe, E.B., Kuryshev, V.Y., Shpakovich, V.M. and Perevozchikov, A.P. 1999. DNA-protein interactions between mammalian nuclear proteins and a GCC-element included in a composite *cis*-acting element of mouse Ribosomal Protein L32 promoter. *Biochemistry* 64: 207-212.
4. Sienna, N., Larson, D.E. and Sells, B.H. 2000. Dexamethasone stimulates Ribosomal Protein L32 gene transcription in rat myoblasts. *Mol. Cell. Endocrinol.* 167: 127-137.
5. Kleene, K.C., Cataldo, L., Mastrangelo, M.A. and Tagne, J.B. 2003. Alternative patterns of transcription and translation of the Ribosomal Protein L32 mRNA in somatic and spermatogenic cells in mice. *Exp. Cell Res.* 291: 101-110.
6. Orlov, S.V., Kuteikin, K.B., Grishin, A.V., Dizhe, E.B., Prokhorchuk, E.B. and Perevozchikov, A.P. 2006. Transcription factor ZF5 regulates expression of mammalian gene containing GCC-triplet repeats in 5'-regulatory region in human hepatoma Hep G2 cells. *Tsitologiya* 48: 246-252.
7. Ueda, M., Fujimoto, M., Arimura, S., Murata, J., Tsutsumi, N. and Kadowaki, K. 2007. Loss of the RPL32 gene from the chloroplast genome and subsequent acquisition of a preexisting transit peptide within the nuclear gene in *Populus*. *Gene* 402: 51-56.
8. Kriegova, E., Arakelyan, A., Fillerova, R., Zatloukal, J., Mrazek, F., Navratilova, Z., Kolek, V., du Bois, R.M. and Petrek, M. 2008. PSMB2 and RPL32 are suitable denominators to normalize gene expression profiles in bronchoalveolar cells. *BMC Mol. Biol.* 9: 69.
9. Ahn, K., Huh, J.W., Park, S.J., Kim, D.S., Ha, H.S., Kim, Y.J., Lee, J.R., Chang, K.T. and Kim, H.S. 2008. Selection of internal reference genes for SYBR green qRT-PCR studies of rhesus monkey (*Macaca mulatta*) tissues. *BMC Mol. Biol.* 9: 78.

CHROMOSOMAL LOCATION

Genetic locus: Rpl37a (mouse) mapping to 1 C3.

PRODUCT

Ribosomal Protein L37a 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 Ribosomal Protein L37a shRNA Plasmid (m): sc-152920-SH and Ribosomal Protein L37a shRNA (m) Lentiviral Particles: sc-152920-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

Ribosomal Protein L37a siRNA (m) is recommended for the inhibition of Ribosomal Protein L37a 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.

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.