SANTA CRUZ BIOTECHNOLOGY, INC.

Ribosomal Protein L36a siRNA (h): sc-91135

BACKGROUND

Ribosomes, the organelles that catalyze protein synthesis, are composed of a small subunit (40S) and a large subunit (60S) that consist of more than 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 L36a, also known as RPL36a, RPL44 (ribosomal protein 44), MIG6 (cell migration-inducing gene 6) or L44L, is a 106 amino acid protein that is a component of the 60S subunit. Localized to the cytoplasm and expressed ubiquitously, Ribosomal Protein L36a is a member of the L44E family of ribosomal proteins and functions in protein synthesis. Like most ribosomal proteins, Ribosomal Protein L36a exists as multiple processed pseudogenes that are scattered throughout the genome. Ribosomal Protein L36a is nearly identical to Ribosomal Protein L36aL, but these proteins are encoded by distinct genes.

REFERENCES

1. Gallagher, M.J., Chan, Y.L., Lin, A. and Wool, I.G. 1988. Primary structure of rat Ribosomal Protein L36a. DNA 7: 269-273.
2. Feo, S., Davies, B. and Fried, M. 1992. The mapping of seven intron-containing ribosomal protein genes shows they are unlinked in the human genome. Genomics 13: 201-207.
3. Oeltjen, J.C., Malley, T.M., Muzny, D.M., Miller, W., Gibbs, R.A. and Belmont, J.W. 1997. Large-scale comparative sequence analysis of the human and murine Bruton's tyrosine kinase loci reveals conserved regulatory domains. Genome Res. 7: 315-329.
4. Blitvich, B.J., Rayms-Keller, A., Blair, C.D. and Beaty, B.J. 2000. Molecular cloning and complete cDNA sequences of the ribosomal proteins rpl34 and rpl44 from *Aedes triseriatus* mosquitoes. DNA Seq. 11: 451-455.
5. Kim, J.H., You, K.R., Kim, I.H., Cho, B.H., Kim, C.Y. and Kim, D.G. 2004. Over-expression of the Ribosomal Protein L36a gene is associated with cellular proliferation in hepatocellular carcinoma. Hepatology 39: 129-138.
6. Thakur, A., Xu, H., Wang, Y., Bollig, A., Biliran, H. and Liao, J.D. 2005. The role of X-linked genes in breast cancer. Breast Cancer Res. Treat. 93: 135-143.

CHROMOSOMAL LOCATION

Genetic locus: RPL36A (human) mapping to Xq22.1.

PRODUCT

Ribosomal Protein L36a 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 L36a shRNA Plasmid (h): sc-91135-SH and Ribosomal Protein L36a shRNA (h) Lentiviral Particles: sc-91135-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 L36a siRNA (h) is recommended for the inhibition of Ribosomal Protein L36a 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.

GENE EXPRESSION MONITORING

Ribosomal Protein L36a (43-A): sc-100831 is recommended as a control antibody for monitoring of Ribosomal Protein L36a 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.

SELECT PRODUCT CITATIONS

1. Shaikho, S., Dobson, C.C., Naing, T., Samanfar, B., Moteshareie, H., Hajikarimloo, M., Golshani, A. and Holcik, M. 2016. Elevated levels of ribosomal proteins eL36 and eL42 control expression of Hsp90 in rhabdomyosarcoma. Translation 4: e1244395.

RESEARCH USE

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