SANTA CRUZ BIOTECHNOLOGY, INC.

Ribosomal Protein L9 shRNA (m) Lentiviral Particles: sc-152928-V

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 L9, also known as RPL9, is a 192 amino acid protein that is a component of the 60S subunit. Localized to the cytoplasm and expressed ubiquitously, Ribosomal Protein L9 belongs to the L6P family of ribosomal proteins and functions in protein synthesis. Like most ribosomal proteins, Ribosomal Protein L9 exists as multiple processed pseudogenes that are scattered throughout the genome. Due to alternative splicing events, Ribosomal Protein L9 is expressed as two isoforms.

REFERENCES

1. Hori, N., et al. 1993. A new human ribosomal protein sequence, homologue of rat L9. Nucleic Acids Res. 21: 4395.
2. Mazuruk, K., et al. 1996. Structural organization and chromosomal localization of the human Ribosomal Protein L9 gene. Biochim. Biophys. Acta 1305: 151-162.
3. Kenmochi, N., et al. 1998. A map of 75 human ribosomal protein genes. Genome Res. 8: 509-523.
4. Angelastro, J.M., et al. 2002. Nerve growth factor selectively regulates expression of transcripts encoding ribosomal proteins. BMC Neurosci. 3: 3.
5. Yoshihama, M., et al. 2002. The human ribosomal protein genes: sequencing and comparative analysis of 73 genes. Genome Res. 12: 379-390.

CHROMOSOMAL LOCATION

Genetic locus: Rpl9 (mouse) mapping to 5 C3.1.

PRODUCT

Ribosomal Protein L9 shRNA (m) Lentiviral Particles are concentrated, transduction-ready viral particles containing a target-specific construct that encodes a 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200 µl frozen stock containing 1.0 x 10^6 lentiviral transducing particles per milliliter in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see Ribosomal Protein L9 siRNA (m): sc-152928 and Ribosomal Protein L9 shRNA Plasmid (m): sc-152928-SH as alternate gene silencing products.

RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.

APPLICATIONS

Ribosomal Protein L9 shRNA (m) Lentiviral Particles is recommended for the inhibition of Ribosomal Protein L9 expression in mouse cells.

SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 µl frozen viral stock containing 1.0 x 10^6 infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

GENE EXPRESSION MONITORING

Ribosomal Protein L9 (FL-192): sc-292593 is recommended as a control antibody for monitoring of Ribosomal Protein L9 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 L9 gene expression knockdown using RT-PCR Primer: Ribosomal Protein L9 (m)-PR: sc-152928-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

STORAGE

Store lentiviral particles at -80° C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at 4° C for up to one week. Avoid repeated freeze thaw cycles.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.