SANTA CRUZ BIOTECHNOLOGY, INC.

SRP9 siRNA (h): sc-41359

BACKGROUND

Short interspersed elements (SINEs) are ubiquitous repetitive DNAs that occur in the mammalian genome. The progenitor of the most common human SINE, the Alu repeat, may be 7SL RNA, which is a component of the signal recognition particle, SRP. SRP is a ribonucleoprotein complex that mediates the targeting of proteins to the endoplasmic reticulum. The "Alu domain" of SRP comprises the heterodimer of the SRP9 and SRP14 proteins, which are bound to the 5' and 3' terminal sequences of SRP RNA. SRP9/14 binding may be crucial to the transcription, maturation, nucleolus localization and transport of SRP RNA. The genes encoding SRP9 and SRP14 map to chromosomes 1q42.12 and 15q22, respectively.

REFERENCES

1. Chang, D.Y., Nelson, B., Bilyeu, T., Hsu, K., Darlington, G.J. and Maria, R.J. 1994. A human Alu RNA-binding protein whose expression is associated with accumulation of small cytoplasmic Alu RNA. Mol. Cell. Biol. 14: 3949-3959.
2. Hsu, K., Chang, D.Y. and Maraia, R.J. 1995. Human signal recognition particle (SRP) Alu-associated protein also binds Alu interspersed repeat sequence RNAs: characterization of human SRP9. J. Biol. Chem. 270: 10179-10186.
3. Larsen, N., Samuelsson, T. and Swieb, C. 1998. The signal recognition particle database (SRPDB). Nucleic Acids Res. 26: 177-178.
4. Weichenrieder, O., Wild, K., Strub, K. and Cusack, S. 2000. Structure and assembly of the Alu domain of the mammalian signal recognition particle. Nature 408: 167-173.
5. LocusLink Report (LocusID: 6726). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: SRP9 (human) mapping to 1q42.12.

PRODUCT

SRP9 siRNA (h) is a pool of 3 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 SRP9 shRNA Plasmid (h): sc-41359-SH and SRP9 shRNA (h) Lentiviral Particles: sc-41359-V as alternate gene silencing products.

For independent verification of SRP9 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-41359A, sc-41359B and sc-41359C.

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.

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

SRP9 siRNA (h) is recommended for the inhibition of SRP9 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

SRP9 (G-9): sc-514722 is recommended as a control antibody for monitoring of SRP9 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 SRP9 gene expression knockdown using RT-PCR Primer: SRP9 (h)-PR: sc-41359-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.