

RASL11B siRNA (m): sc-152713

BACKGROUND

RASL11B (Rsa-like, family 11, member B) is a widely expressed protein with highest levels of expression in placenta and primary macrophages. RASL11B is a Ras-related GTPase and belongs to a Ras subfamily of potential tumor suppressors. Although it shares a high degree of similarity with Ras proteins, RASL11B lacks the characteristic prenylation sites of Ras proteins. Members of the Ras superfamily of small molecular weight GTPases play diverse and critical roles in mediating cellular responses to extracellular stimuli, including mitogenesis, cytoskeletal maintenance and rearrangement, and integrin activation. RASL11B is believed to localize to the cytoplasm and, as is suggested by its TGF β 1-induced expression, may participate in TGF β 1-regulated developmental processes. In addition, RASL11B may contribute to conditions such as inflammation, arteriosclerosis and cancer.

REFERENCES

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3. Abdellatif, M., et al. 1997. An effector-like function of Ras GTPase-activating protein predominates in cardiac muscle cells. *J. Biol. Chem.* 272: 525-533.
4. Reedquist, K.A., et al. 1998. Costimulation through CD28 suppresses T cell receptor-dependent activation of the Ras-like small GTPase Rap1 in human T lymphocytes. *J. Biol. Chem.* 273: 4944-4949.
5. Seastone, D.J., et al. 1999. The small Mr Ras-like GTPase Rap1 and the phospholipase C pathway act to regulate phagocytosis in Dictyostelium discoideum. *Mol. Biol. Cell* 10: 393-406.
6. Akiyama, T., et al. 2001. Mammalian homologue of *E. coli* Ras-like GTPase (ERA) is a possible apoptosis regulator with RNA binding activity. *Genes Cells* 6: 987-1001.
7. Piddini, E., et al. 2001. The Ras-like GTPase Gem is involved in cell shape remodelling and interacts with the novel kinesin-like protein KIF9. *EMBO J.* 20: 4076-4087.

CHROMOSOMAL LOCATION

Genetic locus: Rasl11b (mouse) mapping to 5 C3.3.

PRODUCT

RASL11B siRNA (m) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see RASL11B shRNA Plasmid (m): sc-152713-SH and RASL11B shRNA (m) Lentiviral Particles: sc-152713-V as alternate gene silencing products.

For independent verification of RASL11B (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-152713A, sc-152713B and sc-152713C.

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

RASL11B siRNA (m) is recommended for the inhibition of RASL11B 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.

GENE EXPRESSION MONITORING

RASL11B (C-3): sc-365425 is recommended as a control antibody for monitoring of RASL11B 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-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 RASL11B gene expression knockdown using RT-PCR Primer: RASL11B (m)-PR: sc-152713-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

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.