

scotin siRNA (m): sc-153268

BACKGROUND

Scotin (protein shisha-5), also known as putative NF κ B-activating protein 120, is a 240 amino acid single-pass type I membrane protein that localizes to the endoplasmic reticulum and nucleus. Scotin belongs to the shisha protein family and contains a proline-rich domain. Both caspase-dependent and p53/TP53-dependent apoptosis appear to be induced by scotin. Scotin is abundant in murine spleen and thymus tissue. The gene encoding scotin maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Key tumor suppressing genes on chromosome 3 include those that encode the apoptosis mediator RASSF1, the cell migration regulator HYAL1 and the angiogenesis suppressor SEMA3B. Marfan syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

1. Bourdon, J.C., et al. 2002. Scotin, a novel p53-inducible proapoptotic protein located in the ER and the nuclear membrane. *J. Cell Biol.* 158: 235-246.
2. Muzny, D.M., et al. 2006. The DNA sequence, annotation and analysis of human chromosome 3. *Nature* 440: 1194-1198.
3. Draeby, I., et al. 2007. The calcium binding protein ALG-2 binds and stabilizes scotin, a p53-inducible gene product localized at the endoplasmic reticulum membrane. *Arch. Biochem. Biophys.* 467: 87-94.
4. Zocchi, L., et al. 2008. Scotin: A new p63 target gene expressed during epidermal differentiation. *Biochem. Biophys. Res. Commun.* 367: 271-276.
5. Gupta, R.K., et al. 2008. Cell cycle regulation by the pro-apoptotic gene scotin. *Cell Cycle* 7: 2401-2408.
6. Ghosh, S., et al. 2008. Alterations of 3p21.31 tumor suppressor genes in head and neck squamous cell carcinoma: Correlation with progression and prognosis. *Int. J. Cancer.* 123: 2594-2604.

CHROMOSOMAL LOCATION

Genetic locus: Shisa5 (mouse) mapping to 9 F2.

PRODUCT

scotin 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 scotin shRNA Plasmid (m): sc-153268-SH and scotin shRNA (m) Lentiviral Particles: sc-153268-V as alternate gene silencing products.

For independent verification of scotin (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-153268A, sc-153268B and sc-153268C.

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 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

scotin siRNA (m) is recommended for the inhibition of scotin 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

scotin (C-7): sc-390725 is recommended as a control antibody for monitoring of scotin 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 Marker[™] 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 scotin gene expression knockdown using RT-PCR Primer: scotin (m)-PR: sc-153268-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.