SANTA CRUZ BIOTECHNOLOGY, INC.

Stannin siRNA (m): sc-61619

BACKGROUND

Stannin, also designated Snn, is a membrane-bound protein localized primarily to mitochondria and vesicular organelles, and is involved in the cytotoxic response to organotins. Stannin, which contains a transmembrane domain and a CXC metal binding motif, is localized to tissues with trimethyltin (TMT) sensitivity, such as lung, kidney, spleen, immune system and the central nervous system. Stannin is capable of dealkylating organotin compounds, which may mediate selective alkytin toxicity. Stannin is also thought to detect mitochondrial damage and, through cross-talk with nuclear compartments, mediate growth and apoptosis.

REFERENCES

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4. Buck-Koehntop, B.A., Mascioni, A., Buffy, J.J. and Veglia, G. 2005. Structure, dynamics, cell apoptosis induced by trimethyltin chloride. J. Mol. Biol. 354: 652-665.
5. Reese, B.E., Davidson, C., Billingsley, M.L. and Yun, J. 2005. Protein kinase C ε regulates tumor necrosis factor-α-induced stannin gene expression. J. Pharmacol. Exp. Ther. 314: 61-69.
6. Billingsley, M.L., Yun, J., Reese, B.E., Davidson, C.E., Buck-Koehntop, B.A. and Veglia, G. 2006. Functional and structural properties of stannin: roles in cellular growth, selective toxicity, and mitochondrial responses to injury. J. Cell. Biochem. 98: 243-250.
7. Reese, B.E., Krissinger, D., Yun, J.K. and Billingsley, M.L. 2006. Elucidation of stannin function using microarray analysis: implications for cell cycle control. Gene Expr. 13: 41-52.

CHROMOSOMAL LOCATION

Genetic locus: Snn (mouse) mapping to 16 A1.

PRODUCT

Stannin 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Stannin shRNA Plasmid (m): sc-61619-SH and Stannin shRNA (m) Lentiviral Particles: sc-61619-V as alternate gene silencing products.

For independent verification of Stannin (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-61619A, sc-61619B and sc-61619C.

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

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

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Stannin gene expression knockdown using RT-PCR Primer: Stannin (m)-PR: sc-61619-PR (20 µl). 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.