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# SHISA3 siRNA (m): sc-153451

## BACKGROUND

SHISA3 (shisa homolog 3), also known as hShisa3, is a 238 amino acid single-pass type I membrane protein that localizes to the endoplasmic reticulum. SHISA3 may play an essential role in the maturation of presomitic mesoderm cells by individual attenuation of both FGF and WNT signaling. SHISA3 is encoded by a gene located on human chromosome 4, which houses nearly 6% of the human genome and has the largest gene deserts (regions of the genome with no protein encoding genes) of all of the human chromosomes. Defects in some of the genes located on chromosome 4 are associated with Huntington's disease, Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

## REFERENCES

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- Cowan, C.M. and Raymond, L.A. 2006. Selective neuronal degeneration in Huntington's disease. *Curr. Top. Dev. Biol.* 75:25-71.
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- Cunningham, M.L., et al. 2007. Syndromic craniosynostosis: from history to hydrogen bonds. *Orthod. Craniofac. Res.* 10: 67-81.
- de Frutos, C.A., et al. 2007. Snail1 Is a Transcriptional Effector of FGFR3 Signaling during Chondrogenesis and Achondroplasias. *Dev. Cell* 13: 872-883.
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- Ruiz-Perez, V.L., et al. 2007. Evc is a positive mediator of Ihh-regulated bone growth that localises at the base of chondrocyte cilia. *Development* 134: 2903-2912.

## CHROMOSOMAL LOCATION

Genetic locus: Shisa3 (mouse) mapping to 5 C3.1.

## PRODUCT

SHISA3 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SHISA3 shRNA Plasmid (m): sc-153451-SH and SHISA3 shRNA (m) Lentiviral Particles: sc-153451-V as alternate gene silencing products.

For independent verification of SHISA3 (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-153451A, sc-153451B and sc-153451C.

## PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

SHISA3 siRNA (m) is recommended for the inhibition of SHISA3 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  $\mu$ M in 66  $\mu$ 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SHISA3 gene expression knockdown using RT-PCR Primer: SHISA3 (m)-PR: sc-153451-PR (20  $\mu$ 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.