



StARD9 siRNA (m): sc-63084

BACKGROUND

The StARD (steroidogenic acute regulatory protein-related lipid transfer (START) domain containing) family of proteins is comprised of 15 different members. All members contain the characteristic START domain and are believed to play key roles in the metabolism and transport of lipids. The StARD proteins are grouped into six subfamilies based on their START domain sequences. StARD9, on its own, constitutes one of the six subfamilies. StARD9 is a very large (4,614 amino acids long) protein that contains one FHA domain, one kinesin-motor domain and one START domain. It is predominantly expressed in muscle, pancreas, prostate, lung and the central nervous system. Three different StARD9 isoforms exist due to alternative splicing events.

REFERENCES

1. Kishida, T., Kostetskii, I., Zhang, Z., Martinez, F., Liu, P., Walkley, S.U., Dwyer, N.K., Blanchette-Mackie, E.J. and Radice, G.L. 2004. Targeted mutation of the MLN.START domain causes only modest alterations in cellular sterol metabolism. *J. Biol. Chem.* 279: 19276-19285.
2. Ishikawa, T., Hwang, K., Lazzarino, D. and Morris, P.L. 2005. Sertoli cell expression of steroidogenic acute regulatory protein-related lipid transfer 1 and 5 domain-containing proteins and sterol regulatory element binding protein-1 are interleukin-1 β regulated by activation of c-Jun N-terminal kinase and cyclooxygenase-2 and cytokine induction. *Endocrinology* 146: 5100-5111.
3. Alpy, F. and Tomasetto, C. 2005. Give lipids a START: the StAR-related lipid transfer (START) domain in mammals. *J. Cell Sci.* 118: 2791-2801.
4. Halama, N., Grauling-Halama, S.A. and Jäger, D. 2006. Identification and characterization of the human StARD9 gene in the LGMD2A-region on chromosome 15q15 by in silico methods. *Int. J. Mol. Med.* 18: 653-656.
5. Kanno, K., Wu, M.K., Agate, D.S., Fanelli, B.J., Wagle, N., Scapa, E.F., Ukomadu, C. and Cohen, D.E. 2007. Interacting proteins dictate function of the minimal START domain phosphatidylcholine transfer protein/StARD2. *J. Biol. Chem.* 282: 30728-30736.
6. Nunez, B.S. and Evans, A.N. 2007. Hormonal regulation of the steroidogenic acute regulatory protein (StAR) in gonadal tissues of the Atlantic croaker (*Micropogonias undulatus*). *Gen. Comp. Endocrinol.* 150: 495-504.
7. Ran, Y., Bose, M., Bose, H.S., Whittall, R.M., Baker, B.Y. and Miller, W.L. 2008. StAR-like activity and molten globule behavior of StARD6, a male germ-line protein. *Biochemistry* 47: 2277-2288.

CHROMOSOMAL LOCATION

Genetic locus: Stard9 (mouse) mapping to 2 E5.

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.

PRODUCT

StARD9 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 StARD9 shRNA Plasmid (m): sc-63084-SH and StARD9 shRNA (m) Lentiviral Particles: sc-63084-V as alternate gene silencing products.

For independent verification of StARD9 (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-63084A, sc-63084B and sc-63084C.

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

StARD9 siRNA (m) is recommended for the inhibition of StARD9 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor StARD9 gene expression knockdown using RT-PCR Primer: StARD9 (m)-PR: sc-63084-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.