SANTA CRUZ BIOTECHNOLOGY, INC.

StARD6 siRNA (h): sc-63076

BACKGROUND

The StARD (steroidogenic acute regulatory protein-related lipid transfer (START) domain containing) family of proteins is comprised of fifteen 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. StARD4, StARD5 and StARD6 constitute one subfamily, sharing approximately 30% amino acid identity with each other. StARD6 is specifically expressed in the testis, while StARD4 and StARD5 are widely expressed with predominant expression in kidney and liver. These proteins are believed to function in the intracellular cytosolic transport of sterols and/or the biosynthesis of cholesterol. The expression of StARD4 can be regulated by sterols, whereas the expression of StARD5 is not sterol-regulated but can be induced by endomplasmic reticulum (ER) stress. Due to its exclusive tissue expression and its interaction with sterols, StARD6 may function in reproduction and germ cell maturation.

REFERENCES

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2. 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.
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6. Yamada, S., et al. 2006. Regulation of human StARD4 gene expression under endoplasmic reticulum stress. Biochem. Biophys. Res. Commun. 343: 1079-1085.
7. Rodriguez-Agudo, D., et al. 2006. Localization of StarD5 cholesterol binding protein. J. Lipid Res. 47: 1168-1175.
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PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: STARD6 (human) mapping to 18q21.2.

PRODUCT

StARD6 siRNA (h) 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 StARD6 shRNA Plasmid (h): sc-63076-SH and StARD6 shRNA (h) Lentiviral Particles: sc-63076-V as alternate gene silencing products.

For independent verification of StARD6 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-63076A, sc-63076B and sc-63076C.

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

StARD6 siRNA (h) is recommended for the inhibition of StARD6 expression in human 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 StARD6 gene expression knockdown using RT-PCR Primer: StARD6 (h)-PR: sc-63076-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.