SANTA CRUZ BIOTECHNOLOGY, INC.

StARD10 siRNA (h): sc-106575

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. PC-TP (StARD2), StARD7, StARD10 and GPBP (StARD11) constitute one subfamily, namely the STARD2/PCTP group. StARD10, also known as PCTP2, PCTPL, NY-CO-28, CGI-52 or SDCCAG28, is widely expressed and functions in phospholipid transfer, binding to phosphatidylcholine and phosphatidylethanolamine. StARD10 can be found in sperm flagellum, potentially functioning as an enzyme involved in energy metabolism, and its expression is developmentally regulated in testis and mammary glands. StARD10 activity can be inhibited via phosphorylation by casein kinase II.

REFERENCES

1. Olayioye, M.A., et al. 2004. The phosphoprotein StARD10 is overexpressed in breast cancer and cooperates with ErbB receptors in cellular transformation. Cancer Res. 64: 3538-3544.
2. Alpy, F., et al. 2005. Give lipids a START: the StAR-related lipid transfer (START) domain in mammals. J. Cell Sci. 118: 2791-2801.
3. Soccio, R.E., et al. 2005. Differential gene regulation of StARD4 and StARD5 cholesterol transfer proteins. Activation of StARDD4 by sterol regulatory element-binding protein-2 and StARD5 by endoplasmic reticulum stress. J. Biol. Chem. 280: 19410-19418.
4. Olayioye, M.A., et al. 2005. StARD10, a START domain protein overexpressed in breast cancer, functions as a phospholipid transfer protein. J. Biol. Chem. 280: 27436-27442.
5. Ishikawa, T., et al. 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-1β regulated by activation of c-Jun N-terminal kinase and cyclooxygenase-2 and cytokine induction. Endocrinology 146: 5100-5111.

CHROMOSOMAL LOCATION

Genetic locus: STARD10 (human) mapping to 11q13.4.

PRODUCT

StARD10 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 StARD10 shRNA Plasmid (h): sc-106575-SH and StARD10 shRNA (h) Lentiviral Particles: sc-106575-V as alternate gene silencing products.

For independent verification of StARD10 (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-106575A, sc-106575B and sc-106575C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

StARD10 siRNA (h) is recommended for the inhibition of StARD10 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.

GENE EXPRESSION MONITORING

StARD10 (C-11): sc-365580 is recommended as a control antibody for monitoring of StARD10 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 StARD10 gene expression knockdown using RT-PCR Primer: StARD10 (h)-PR: sc-106575-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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