

StARD13 siRNA (m): sc-63071

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. StARD8, StARD12 and StARD13 constitute one subfamily, namely the RhoGAP START group. StARD13, also known as DLC2 (deleted in liver cancer protein 2) or GT650, is a RhoGAP protein specific for Rho A and Cdc42. StARD13 contains one RhoGAP domain, one SAM (sterile alpha motif) domain and one START domain. It localizes to the mitochondrion and cytoplasmic speckles in close association with lipid droplets, suggesting an additional function for StARD13 in mitochondrial lipid transport. StARD13 is ubiquitously expressed but is often deleted in hepatocellular and breast cancer cells, implying that StARD13 also acts as a tumor suppressor.

REFERENCES

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- Ng, D.C., et al. 2006. Mitochondrial targeting of growth suppressor protein DLC2 through the START domain. *FEBS Lett.* 580: 191-198.
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CHROMOSOMAL LOCATION

Genetic locus: Stard13 (mouse) mapping to 5 G3.

PRODUCT

StARD13 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 StARD13 shRNA Plasmid (m): sc-63071-SH and StARD13 shRNA (m) Lentiviral Particles: sc-63071-V as alternate gene silencing products.

For independent verification of StARD13 (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-63071A, sc-63071B and sc-63071C.

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

StARD13 siRNA (m) is recommended for the inhibition of StARD13 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.

GENE EXPRESSION MONITORING

StARD13 (H-10): sc-377054 is recommended as a control antibody for monitoring of StARD13 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 StARD13 gene expression knockdown using RT-PCR Primer: StARD13 (m)-PR: sc-63071-PR (20 μ 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.

PROTOCOLS

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