



Fdx1 shRNA Plasmid (m): sc-145154-SH

BACKGROUND

Adrenodoxin (ADX) is an acidic [2Fe-2S] adrenal ferredoxin that belongs to the vertebrate ferredoxin family. ADX functions as a soluble electron carrier between the NADPH-dependent adrenodoxin reductase and cytochrome P450. ADX localizes to the adrenal cortex mitochondrial matrix, where it participates in the synthesis of Vitamin D and bile acids. Human ADX maps to chromosome 11q22.3.

REFERENCES

- Morel, Y., Picado-Leonard, J., Wu, D.A., Chang, C.Y., Mohandas, T.K., Chung, B.C. and Miller, W.L. 1988. Assignment of the functional gene for human adrenodoxin to chromosome 11q13-qter and of adrenodoxin pseudogenes to chromosome 20cen-q13.1. *Am. J. Hum. Genet.* 43: 52-59.
- Grinberg, A.V., Hannemann, F., Schiffler, B., Müller, J., Heinemann, U. and Bernhardt, R. 2000. Adrenodoxin: structure, stability, and electron transfer properties. *Proteins* 40: 590-612.
- Beilke, D., Weiss, R., Löhr, F., Pristovsek, P., Hannemann, F., Bernhardt, R. and Rüterjans, H. 2002. A new electron transport mechanism in mitochondrial steroid hydroxylase systems based on structural changes upon the reduction of adrenodoxin. *Biochemistry* 41: 7969-7978.
- LocusLink Report (LocusID: 2230). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: Fdx1 (mouse) mapping to 9 A5.3.

PRODUCT

Fdx1 shRNA Plasmid (m) is a pool of 3 target-specific lentiviral vector plasmids each encoding 19-25 nt (plus hairpin) shRNAs designed to knock down gene expression. Each plasmid contains a puromycin resistance gene for the selection of cells stably expressing shRNA. Each vial contains 20 µg of lyophilized shRNA plasmid DNA. Suitable for up to 20 transfections. Also see Fdx1 siRNA (m): sc-145154 and Fdx1 shRNA (m) Lentiviral Particles: sc-145154-V as alternate gene silencing products.

STORAGE AND RESUSPENSION

Store lyophilized shRNA plasmid DNA at 4° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at 4° C for short term storage or -80° C for long term storage. Avoid repeated freeze thaw cycles.

Resuspend lyophilized shRNA plasmid DNA in 200 µl of the deionized water provided. Resuspension of the shRNA plasmid DNA in 200 µl of deionized water makes a 0.1 µg/µl solution in a 10 mM Tris, 1 mM EDTA buffered solution.

PROTOCOLS

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

APPLICATIONS

Fdx1 shRNA Plasmid (m) is recommended for the inhibition of Fdx1 expression in mouse cells.

SUPPORT REAGENTS

For optimal shRNA Plasmid transfection efficiency, Santa Cruz Biotechnology's shRNA Plasmid Transfection Reagent: sc-108061 (0.2 ml) and shRNA Plasmid Transfection Medium: sc-108062 (20 ml) are recommended. Control shRNAs are available as 20 µg lyophilized plasmid DNA. Each encodes a scrambled shRNA sequence that will not lead to the specific degradation of any known cellular mRNA. Control shRNA Plasmids include: sc-108060, sc-108065 and sc-108066.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Fdx1 gene expression knockdown using RT-PCR Primer: Fdx1 (m)-PR: sc-145154-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.