SANTA CRUZ BIOTECHNOLOGY, INC.

FABP12 siRNA (m): sc-108294

BACKGROUND

Fatty acid-binding proteins, designated FABPs, are a family of homologous cytoplasmic proteins that are expressed in a highly tissue-specific manner and play an integral role in the balance between lipid and carbohydrate metabolism. FABPs mediate fatty acid (FA) and/or hydrophobic ligand uptake, transport and targeting within their respective tissues. The mechanisms underlying these actions can give rise to both passive diffusional uptake and protein-mediated transmembrane transport of FAs. FABP12 (fatty acid-binding protein 12) is a 132 amino acid protein that belongs to the calycin superfamily and fatty-acid binding protein family. Highly expressed in adult retina and testis, FABP12 may function in lipid transport. The gene encoding FABP12 maps to mouse chromosome 3 A1.

REFERENCES

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2. Glatz, J.F. and Storch, J. 2001. Unravelling the significance of cellular fatty acid-binding proteins. Curr. Opin. Lipidol. 12: 267-274.
3. Blackshaw, S., Harpavat, S., Trimarchi, J., Cai, L., Huang, H., Kuo, W.P., Weber, G., Lee, K., Fraioli, R.E., Cho, S.H., Yung, R., Asch, E., Ohno-Machado, L., Wong, W.H. and Cepko, C.L. 2004. Genomic analysis of mouse retinal development. PLoS Biol. 2: E247.
4. Liu, R.Z., Li, X. and Godbout, R. 2008. A novel fatty acid-binding protein (FABP) gene resulting from tandem gene duplication in mammals: transcription in rat retina and testis. Genomics 92: 436-445.
5. Toelle, A., Suhail, S., Jung, M., Jung, K. and Stephan, C. 2011. Fatty acid binding proteins (FABPs) in prostate, bladder, and kidney cancer cell lines and the use of IL-FABP as survival predictor in patients with renal cell carcinoma. BMC Cancer 11: 302.
6. Smathers, R.L. and Petersen, D.R. 2011. The human fatty acid-binding protein family: evolutionary divergences and functions. Hum. Genomics 5: 170-191.

CHROMOSOMAL LOCATION

Genetic locus: Fabp12 (mouse) mapping to 3 A1.

PRODUCT

FABP12 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see FABP12 shRNA Plasmid (m): sc-108294-SH and FABP12 shRNA (m) Lentiviral Particles: sc-108294-V as alternate gene silencing products.

For independent verification of FABP12 (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-108294A, sc-108294B and sc-108294C.

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

FABP12 siRNA (m) is recommended for the inhibition of FABP12 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 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 FABP12 gene expression knockdown using RT-PCR Primer: FABP12 (m)-PR: sc-108294-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.

PROTOCOLS

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