SANTA CRUZ BIOTECHNOLOGY, INC.

Dbil5 siRNA (m): sc-142881

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The Power to Question

BACKGROUND

Acyl-CoA-binding proteins (ACBP), also known as endozepines (EP) or diazepam binding inhibitors (DBI), are highly conserved, small proteins that bind to medium and long chain acyl-CoA esters with high affinity. ACBPs are suggested to function as intracellular carriers of acyl-CoA esters, important signaling molecules that are involved in numerous lipid metabolic pathways. The ACBP family of proteins have the ability to displace diazepam from the $GABA_A$ receptor, affect cell growth, induce medium-chain acyl-CoA-ester synthesis, stimulate steroid hormone synthesis, and affect glucose-induced Insulin secretion. Dbil5 (diazepam binding inhibitor-like 5), also known as ELP (endozepine-like peptide), is a 87 amino acid cytoplasimic murine protein that belongs to the ACBP family. Exclusively express in late spermatids and spermatozoa, Dbil5 is thought to be involved in the energy metabolism of mature sperm. Dbil5 consist of one ACB (acyl-CoA-binding) domain and is encoded by a gene mapping to mouse chromosome 11 B5.

REFERENCES

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3. Knudsen, J., Neergaard, T.B., Gaigg, B., Jensen, M.V. and Hansen, J.K. 2000. Role of acyl-CoA binding protein in acyl-CoA metabolism and acyl-CoA-mediated cell signaling. J. Nutr. 130: 294S-298S.
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5. Huang, H., Atshaves, B.P., Frolov, A., Kier, A.B. and Schroeder, F. 2005. Acyl-coenzyme A binding protein expression alters liver fatty acyl-coenzyme A metabolism. Biochemistry 44: 10282-10297.
6. Bouyakdan, K., Taïb, B., Budry, L., Zhao, S., Rodaros, D., Neess, D., Mandrup, S., Faergeman, N.J. and Alquier, T. 2015. A novel role for central ACBP/DBI as a regulator of long-chain fatty acid metabolism in astrocytes. J. Neurochem. 133: 253-265.
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CHROMOSOMAL LOCATION

Genetic locus: Dbil5 (mouse) mapping to 11 B5.

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.

PRODUCT

Dbil5 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 Dbil5 shRNA Plasmid (m): sc-142881-SH and Dbil5 shRNA (m) Lentiviral Particles: sc-142881-V as alternate gene silencing products.

For independent verification of Dbil5 (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-142881A, sc-142881B and sc-142881C.

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

Dbil5 siRNA (m) is recommended for the inhibition of Dbil5 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 Dbil5 gene expression knockdown using RT-PCR Primer: Dbil5 (m)-PR: sc-142881-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.