SANTA CRUZ BIOTECHNOLOGY, INC.

GLYAT siRNA (m): sc-75150

BACKGROUND

GLYAT (glycine-N-acyltransferase), also known as GAT, CAT, HRP-1(CLP), acyl-CoA:glycine N-acyltransferase (AAc) or ACGNAT, is a 296 amino acid mitochondrial acyltransferase that conjugates glycine to acyl-CoA substrates. Existing as 2 alternatively spliced isoforms, GLYAT may participate in detoxification of endogenous and xenobiotic acyl-CoA and is expressed in human liver at peak levels from 18 months to 40 years. Children under seven months express only five to forty percent of liver GLYAT specific activity, thereby functioning with a lower ability to detoxify their system of certain drugs and xenobiotics. A member of the glycine N-acyltransferase family, GLYAT is encoded by a gene located on human chromosome 11q12.1, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Glyat (mouse) mapping to 19 A.

PROTOCOLS

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

PRODUCT

GLYAT 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 GLYAT shRNA Plasmid (m): sc-75150-SH and GLYAT shRNA (m) Lentiviral Particles: sc-75150-V as alternate gene silencing products.

For independent verification of GLYAT (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-75150A, sc-75150B and sc-75150C.

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

GLYAT siRNA (m) is recommended for the inhibition of GLYAT 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 GLYAT gene expression knockdown using RT-PCR Primer: GLYAT (m)-PR: sc-75150-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.