SANTA CRUZ BIOTECHNOLOGY, INC.

AASDHPPT siRNA (m): sc-140737

BACKGROUND

AASDHPPT (aminoadipate-semialdehyde dehydrogenase-phosphopantetheinyl transferase), also known as LYS2, LYS5 or CGI-80, is a 309 amino acid protein that localizes to the cytoplasm and belongs to the P-Pant transferase superfamily. Expressed in testis, liver, kidney, heart, brain, placenta and skeletal muscle, AASDHPPT exists as a monomer that functions to catalyze the phosphopantetheine-dependent post-translational modification of target proteins, effectively transferring a 4'-phosphopantetheine moiety from coenzyme A (CoA) to a serine residue of an acceptor protein. AASDHPPT is subject to DNA damage-dependent phosphorylation, probably by ATM or ATR. The gene encoding AASDHPPT maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome.

REFERENCES

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2. Lai, C.H., Chou, C.Y., Chang, L.Y., Liu, C.S. and Lin, W. 2000. Identification of novel human genes evolutionarily conserved in *Caenorhabditis elegans* by comparative proteomics. Genome Res. 10: 703-713.
3. Praphanphoj, V., Sacksteder, K.A., Gould, S.J., Thomas, G.H. and Geraghty, M.T. 2001. Identification of the α-aminoadipic semialdehyde dehydrogenase-phosphopantetheinyl transferase gene, the human ortholog of the yeast LYS5 gene. Mol. Genet. Metab. 72: 336-342.
4. Joshi, A.K., Zhang, L., Rangan, V.S. and Smith, S. 2003. Cloning, expression, and characterization of a human 4'-phosphopantetheinyl transferase with broad substrate specificity. J. Biol. Chem. 278: 33142-33149.

CHROMOSOMAL LOCATION

Genetic locus: Aasdhppt (mouse) mapping to 9 A1.

PRODUCT

AASDHPPT siRNA (m) is a target-specific 19-25 nt siRNA 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 AASDHPPT shRNA Plasmid (m): sc-140737-SH and AASDHPPT shRNA (m) Lentiviral Particles: sc-140737-V as alternate gene silencing products.

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.

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

AASDHPPT siRNA (m) is recommended for the inhibition of AASDHPPT 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 AASDHPPT gene expression knockdown using RT-PCR Primer: AASDHPPT (m)-PR: sc-140737-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.