SANTA CRUZ BIOTECHNOLOGY, INC.

ASPHD1 siRNA (h): sc-93091

BACKGROUND

ASPHD1 (aspartate β-hydroxylase domain containing 1) is a 390 amino acid single-pass type II membrane protein belonging to the aspartyl/asparaginyl β-hydroxylase family. Conserved in chimpanzee, canine, bovine, rat and zebrafish, ASPHD1 participates in oxidoreductase activity, acting on single donors with incorporation of two atoms of oxygen, and peptide-aspartate β-dioxygenase activity. Encoded by a gene that maps to human chromosome 16p11.2, ASPHD1 is one of 25 genes in a microdeletion associated with endocardial fibroelastosis. Duplication in 16p11.2 is linked to malignant migrating partial seizure disorder of infancy, and recurrent rearrangements in 16p11.2 are linked to numerous neurodevelopmental disorders, including autism, mental retardation and schizophrenia. Paroxysmal kinesigenic choreoathetosis (PKC) is also linked to 16p11-q21 mutations.

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CHROMOSOMAL LOCATION

Genetic locus: ASPHD1 (human) mapping to 16p11.2.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

ASPHD1 siRNA (h) is a pool of 2 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 ASPHD1 shRNA Plasmid (h): sc-93091-SH and ASPHD1 shRNA (h) Lentiviral Particles: sc-93091-V as alternate gene silencing products.

For independent verification of ASPHD1 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-93091A and sc-93091B.

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

ASPHD1 siRNA (h) is recommended for the inhibition of ASPHD1 expression in human 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 ASPHD1 gene expression knockdown using RT-PCR Primer: ASPHD1 (h)-PR: sc-93091-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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