SANTA CRUZ BIOTECHNOLOGY, INC.

AKR1CL1 siRNA (h): sc-90508

BACKGROUND

AKR1CL1 (aldo-keto reductase family 1, member C-like 1) is a 129 amino acid protein that localizes to the cytoplasm and participates in oxidoreductase activities. Located on human chromosome 10p15.1, the AKR1CL1 gene is one of six known human AKR genes, which include AKR1CL2, DD1, DD2, DD3 and DD4, and is located between DD3 and DD4. A deletion in the 10.15 region of the short arm of chromosome 10, which includes AKR1CL1, is associated with congenital Rett-syndrome, a severe neurodegenerative disorder typified by acquired microcephaly, communication dysfunction, psychomotor regression, seizures and stereotypical hand movements.

REFERENCES

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4. Jacob, F.D., Ramaswamy, V., Andersen, J. and Bolduc, F.V. 2009. Atypical Rett syndrome with selective FOXG1 deletion detected by comparative genomic hybridization: case report and review of literature. Eur. J. Hum. Genet. 17: 1577-1581.
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CHROMOSOMAL LOCATION

Genetic locus: AKR1CL1 (human) mapping to 10p15.1.

PRODUCT

AKR1CL1 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 AKR1CL1 shRNA Plasmid (h): sc-90508-SH and AKR1CL1 shRNA (h) Lentiviral Particles: sc-90508-V as alternate gene silencing products.

For independent verification of AKR1CL1 (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-90508A and sc-90508B.

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

AKR1CL1 siRNA (h) is recommended for the inhibition of AKR1CL1 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.

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.