

# AKR1E1 siRNA (m): sc-140993

## BACKGROUND

AKR1E1 (aldo-keto reductase family 1 member E1), also known as Akr1c12 (aldo-keto reductase family 1 member C-like protein 2), Akr1e2 (aldo-keto reductase family 1 member E2) or 1,5-anhydro-D-fructose reductase, is a 301 amino acid cytoplasmic protein that belongs to the aldo-keto reductase family. Members of the aldo-keto reductase family are involved in prereceptor or intracrine steroid modulation, and also act as bile acid-binding proteins. While it catalyzes the NADPH-dependent reduction of 1,5-anhydro-D-fructose to 1,5-anhydro-D-glucitol, AKR1E1 also catalyzes the reduction of various aldehydes and quinones. The gene that encodes AKR1E1 maps to mouse chromosome 13 A1.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Akr1e1 (mouse) mapping to 13 A1.

## PRODUCT

AKR1E1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see AKR1E1 shRNA Plasmid (m): sc-140993-SH and AKR1E1 shRNA (m) Lentiviral Particles: sc-140993-V as alternate gene silencing products.

## PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

AKR1E1 siRNA (m) is recommended for the inhibition of AKR1E1 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  $\mu$ M in 66  $\mu$ l. 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 AKR1E1 gene expression knockdown using RT-PCR Primer: AKR1E1 (m)-PR: sc-140993-PR (20  $\mu$ l). 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.