SANTA CRUZ BIOTECHNOLOGY, INC.

AOX3 siRNA (m): sc-141129

BACKGROUND

AOX3 (Aldehyde oxidase 3), also known as Azaheterocycle hydroxylase 3, is a 1335 amino acid cytoplasmic protein belonging to the xanthine dehydrogenase family and containing one 2Fe-2S ferredoxin-type domain and one FAD-binding PCMH-type domain. AOX3 is highly expressed in liver tissue, with expression being higher in males than females and inducible by testosterone. AOX3 has broad substrate specificity and several cofactor binding sites. AOX3 plays an important role in the metabolism of xenobiotics and drugs containing aromatic azaheterocyclic substituents, and is thought to also be part of the regulation of reactive oxygen species homeostasis, superoxide generation and catalysis of nitric oxide production. The AOX3 gene is located on mouse chromosome 1 C1 and is conserved in rat but has no known homolog in human.

REFERENCES

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3. Vila, R., et al. 2004. Regulation and biochemistry of mouse molybdo-flavoenzymes. The DBA/2 mouse is selectively deficient in the expression of aldehyde oxidase homologues 1 and 2 and represents a unique source for the purification and characterization of aldehyde oxidase. J. Biol. Chem. 279: 8668-8683.
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CHROMOSOMAL LOCATION

Genetic locus: Aox3 (mouse) mapping to 1 C1.3.

PRODUCT

AOX3 siRNA (m) 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 AOX3 shRNA Plasmid (m): sc-141129-SH and AOX3 shRNA (m) Lentiviral Particles: sc-141129-V as alternate gene silencing products.

For independent verification of AOX3 (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-141129A and sc-141129B.

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

AOX3 siRNA (m) is recommended for the inhibition of AOX3 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 AOX3 gene expression knockdown using RT-PCR Primer: AOX3 (m)-PR: sc-141129-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.

PROTOCOLS

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