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SANTA CRUZ BIOTECHNOLOGY, INC.

CYP2A5 siRNA (m): sc-41488

BACKGROUND

The cytochrome P450 proteins (CYPs) are monooxygenases that catalyze reactions involved in both drug metabolism and in the synthesis of cholesterol, steroids and other lipids. P450 enzymes are classified into subfamilies, such as CYP1A and CYP2A, based on their sequence similarities. CYP2A5 (cytochrome P450, family 2, subfamily a, polypeptide 5), also known as Coh, Cyp15a2 or coumarin 7-hydroxylase, is a 494 amino acid peripheral membrane mouse protein that belongs to the CYP2A subfamily of cytochrome P450 proteins. Localized to the endoplasmic reticulum and expressed in liver, CYP2A5 functions as a hydroxylase that uses a heme group to catalyze the oxidation of target flavoproteins. In mice, CYP2A5 and CYP2A4 (both of which have different substrate specificity) are very similar and can be mutated to adopt the substrate specificity of one another.

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Cyp2a5 (mouse) mapping to 7 A3.

PRODUCT

CYP2A5 siRNA (m) is a pool of 3 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 CYP2A5 shRNA Plasmid (m): sc-41488-SH and CYP2A5 shRNA (m) Lentiviral Particles: sc-41488-V as alternate gene silencing products.

For independent verification of CYP2A5 (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-41488A, sc-41488B and sc-41488C.

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

CYP2A5 siRNA (m) is recommended for the inhibition of CYP2A5 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 CYP2A5 gene expression knockdown using RT-PCR Primer: CYP2A5 (m)-PR: sc-41488-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.