

Cyp3a25 siRNA (m): sc-142714

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, including Cyp1, Cyp2 and Cyp3, based on their sequence similarities. In mice, there are ten Cyp3 genes which encode proteins that are designated Cyp3a11, Cyp3a13, Cyp3a16, Cyp3a25, Cyp3a91, Cyp3a41a, Cyp3a41b, Cyp3a44, Cyp3a57 and Cyp3a59. Most of the mouse Cyp3 proteins are localized to the endoplasmic reticulum and function to catalyze reactions related to the synthesis, degradation and detoxification of various compounds.

REFERENCES

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2. Ramana, K.V. and Kohli, K.K. 1998. Gene regulation of cytochrome P450—an overview. *Indian J. Exp. Biol.* 36: 437-446.
3. Nallani, S.C., Genter, M.B. and Desai, P.B. 2001. Increased activity of Cyp3a enzyme in primary cultures of rat hepatocytes treated with docetaxel: comparative evaluation with paclitaxel. *Cancer Chemother. Pharmacol.* 48: 115-122.
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5. Lewis, D.F., Jacobs, M.N. and Dickins, M. 2004. Compound lipophilicity for substrate binding to human P450s in drug metabolism. *Drug Discov. Today* 9: 530-537.
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CHROMOSOMAL LOCATION

Genetic locus: Cyp3a25 (mouse) mapping to 5 G3.

PRODUCT

Cyp3a25 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Cyp3a25 shRNA Plasmid (m): sc-142714-SH and Cyp3a25 shRNA (m) Lentiviral Particles: sc-142714-V as alternate gene silencing products.

For independent verification of Cyp3a25 (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-142714A and sc-142714B.

PROTOCOLS

See our web site at 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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCL, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Cyp3a25 siRNA (m) is recommended for the inhibition of Cyp3a25 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 μ M in 66 μ 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.

GENE EXPRESSION MONITORING

CYP3A (B-3): sc-365415 is recommended as a control antibody for monitoring of Cyp3a25 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Cyp3a25 gene expression knockdown using RT-PCR Primer: Cyp3a25 (m)-PR: sc-142714-PR (20 μ 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.