

# CYP2C9 siRNA (h): sc-105256

## BACKGROUND

Cytochrome P450, family 2, subfamily C polypeptides 9 and 19 are part of the CYP2C subfamily and are responsible for metabolizing many important drugs. CYP2C19 accounts for about 20% of the cytochrome p450 in adult liver. CYP2C9 contributes to the metabolism of fatty acids, prostanoids, and steroid hormones, and it may catalyze potentially toxic bioactivation reactions. A significant negative correlation ( $r = -0.572$ ,  $P < 0.1$ ) between enzyme activity and age was observed for CYP2C19, but there were no sex differences.

## REFERENCES

1. Masta, A., et al. 2003. Analysis of Sepik populations of Papua New Guinea suggests an increase of CYP2C19 null allele frequencies during the colonization of Melanesia. *Pharmacogenetics* 13: 697-700.
2. Koukouritaki, S.B., et al. 2004. Developmental expression of human hepatic CYP2C9 and CYP2C19. *J. Pharmacol. Exp. Ther.* 308: 965-974.
3. Furuta, T., et al. 2004. Polymorphism of interleukin-1  $\beta$  affects the eradication rates of *Helicobacter pylori* by triple therapy. *Clin. Gastroenterol. Hepatol.* 2: 22-30.
4. Bebia, Z., et al. 2004. Bioequivalence revisited: influence of age and sex on CYP enzymes. *Clin. Pharmacol. Ther.* 76: 618-627.
5. SWISS-PROT/TrEMBL (CAH71303). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

## CHROMOSOMAL LOCATION

Genetic locus: CYP2C9 (human) mapping to 10q23.33.

## PRODUCT

CYP2C9 siRNA (h) 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CYP2C9 shRNA Plasmid (h): sc-105256-SH and CYP2C9 shRNA (h) Lentiviral Particles: sc-105256-V as alternate gene silencing products.

For independent verification of CYP2C9 (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-105256A, sc-105256B and sc-105256C.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at  $-20^{\circ}\text{C}$  with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at  $-20^{\circ}\text{C}$ , 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

CYP2C9 siRNA (h) is recommended for the inhibition of CYP2C9 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  $\mu$ 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.

## GENE EXPRESSION MONITORING

CYP2C6 (K1): sc-53245 is recommended as a control antibody for monitoring of CYP2C9 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CYP2C9 gene expression knockdown using RT-PCR Primer: CYP2C9 (h)-PR: sc-105256-PR (20  $\mu$ l). Annealing temperature for the primers should be  $55-60^{\circ}\text{C}$  and the extension temperature should be  $68-72^{\circ}\text{C}$ .

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.