



UGT2B34 siRNA (m): sc-154900

BACKGROUND

UDP-glucuronosyltransferase isoenzymes (UGTs) catalyze the glucuronidation of small lipophilic molecules, which regulates the bioactivity and metabolic fate of a wide range of endo- and xenobiotics. The UGT2B family of isoenzymes are highly expressed in liver, but are also detected in several non-hepatic tissues. Therefore, the UGT2B family may preferentially modulate steroid metabolism and excretion in addition to bile acids and xenobiotics. UGT2B34 (UDP glucuronosyltransferase 2 family, polypeptide B34) is a 532 amino acid mouse protein that is encoded by a gene that maps to chromosome 5 E1. UGT2B34 is the homolog of human UGT2B10, which is a single-pass membrane protein of the microsome and endoplasmic reticulum.

REFERENCES

1. Jin, C.J., et al. 1993. cDNA cloning and expression of two new members of the human liver UDP-glucuronosyltransferase 2B subfamily. *Biochem. Biophys. Res. Commun.* 194: 496-503.
2. Strassburg, C.P., et al. 1999. Regulation and function of family 1 and family 2 UDP-glucuronosyltransferase genes (UGT1A, UGT2B) in human oesophagus. *Biochem. J.* 338 (Pt. 2): 489-498.
3. Liu, T., et al. 2005. Human plasma N-glycoproteome analysis by immunoaffinity subtraction, hydrazide chemistry, and mass spectrometry. *J. Proteome Res.* 4: 2070-2080.
4. Chen, G., et al. 2007. Glucuronidation of nicotine and cotinine by UGT2B10: loss of function by the UGT2B10 Codon 67 (Asp→Tyr) polymorphism. *Cancer Res.* 67: 9024-9029.
5. Kaivosari, S., et al. 2007. Nicotine glucuronidation and the human UDP-glucuronosyltransferase UGT2B10. *Mol. Pharmacol.* 72: 761-768.
6. Chen, R., et al. 2009. Glycoproteomics analysis of human liver tissue by combination of multiple enzyme digestion and hydrazide chemistry. *J. Proteome Res.* 8: 651-661.
7. Berg, J.Z., et al. 2010. UGT2B10 genotype influences nicotine glucuronidation, oxidation, and consumption. *Cancer Epidemiol. Biomarkers Prev.* 19: 1423-1431.
8. Chen, G., et al. 2010. Glucuronidation genotypes and nicotine metabolic phenotypes: importance of functional UGT2B10 and UGT2B17 polymorphisms. *Cancer Res.* 70: 7543-7552.

CHROMOSOMAL LOCATION

Genetic locus: Ugt2b34 (mouse) mapping to 5 E1.

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.

PRODUCT

UGT2B34 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see UGT2B34 shRNA Plasmid (m): sc-154900-SH and UGT2B34 shRNA (m) Lentiviral Particles: sc-154900-V as alternate gene silencing products.

For independent verification of UGT2B34 (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-154900A, sc-154900B and sc-154900C.

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

UGT2B34 siRNA (m) is recommended for the inhibition of UGT2B34 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor UGT2B34 gene expression knockdown using RT-PCR Primer: UGT2B34 (m)-PR: sc-154900-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.