SANTA CRUZ BIOTECHNOLOGY, INC.

UGT2A2 siRNA (m): sc-41086

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. Glucuronidation increases the polarity of lipophilic molecules and facilitates their entry into aqueous compartments and their ultimate excretion. In essence, glucuronidation provides a protective function by terminating or attenuating the biological activity of its substrates. UGT2A2 (UDP glucuronosyltransferase 2 family, polypeptide A2) is a 536 amino acid protein encoded by a gene that maps to human chromosome 4q13.3. Chromosome 4 represents approximately 6% of the human genome, contains nearly 900 genes and is associated with Huntington's disease, Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

REFERENCES

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3. Belanger, A., et al. 1998. Characterization and regulation of UDP-glucuronosyltransferases in steroid target tissues. J. Steroid Biochem. Mol. Biol. 65: 301-310.
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5. Levesque, E., et al. 1999. Characterization and substrate specificity of UGT2B4 (E458): a UDP-glucuronosyltransferase encoded by a polymorphic gene. Pharmacogenetics 9: 207-216.
6. Lampe, J.W., et al. 2000. Prevalence of polymorphisms in the human UDP-glucuronosyltransferase 2B family: UGT2B4(D458E), UGT2B7(H268Y), and UGT2B15(D85Y). Cancer Epidemiol. Biomarkers Prev. 9: 329-333.
7. Gestl, S.A., et al. 2002. Expression of UGT2B7, a UDP-glucuronosyltransferase implicated in the metabolism of 4-hydroxyestrone and all-*trans* retinoic acid, in normal human breast parenchyma and in invasive and *in situ* breast cancers. Am. J. Pathol. 160: 1467-1479.

CHROMOSOMAL LOCATION

Genetic locus: Ugt2a2 (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

UGT2A2 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 UGT2A2 shRNA Plasmid (m): sc-41086-SH and UGT2A2 shRNA (m) Lentiviral Particles: sc-41086-V as alternate gene silencing products.

For independent verification of UGT2A2 (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-41086A, sc-41086B and sc-41086C.

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

UGT2A2 siRNA (m) is recommended for the inhibition of UGT2A2 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 UGT2A2 gene expression knockdown using RT-PCR Primer: UGT2A2 (m)-PR: sc-41086-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.