

UGT2B4 siRNA (h): sc-41085

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. The UGT2B family of isoenzymes are highly expressed in liver, but are also detected in several non-hepatic tissues, including skin, breast, prostate, intestine, placenta, and lung. Therefore, the UGT2B family may preferentially modulate steroid metabolism and excretion in addition to bile acids and xenobiotics. The human UGT2B genes localize as a cluster on chromosome 4q13.2.

REFERENCES

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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: UGT2B4 (human) mapping to 4q13.2.

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

UGT2B4 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see UGT2B4 shRNA Plasmid (h): sc-41085-SH and UGT2B4 shRNA (h) Lentiviral Particles: sc-41085-V as alternate gene silencing products.

For independent verification of UGT2B4 (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-41085A, sc-41085B and sc-41085C.

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

UGT2B4 siRNA (h) is recommended for the inhibition of UGT2B4 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 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 UGT2B4 gene expression knockdown using RT-PCR Primer: UGT2B4 (h)-PR: sc-41085-PR (20 μ l, 428 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.