

# UGT3A2 (O-22): sc-134142

## BACKGROUND

UDP-glucuronosyltransferase isoenzymes (UGTs) catalyze the glucuronidation of small lipophilic molecules, thereby regulating the bioactivity and metabolic fate of a wide range of endogenous compounds and xenobiotics. Glucuronidation increases the polarity of lipophilic molecules and facilitates their entry into aqueous compartments and, ultimately, their excretion. In essence, glucuronidation provides a protective function by terminating or attenuating the biological activity of its substrates. The UGT3A family of isoenzymes are expressed in liver and kidney, and to a lesser, in the gastrointestinal tract. UGT3A2 (UDP glycosyltransferase 3 family, polypeptide A2) is a 523 amino acid single-pass type I membrane protein that belongs to the UDP-glycosyltransferase family. It has been suggested that members of the UGT3A family may have an important role in the metabolism and elimination of ursodeoxycholic acid, a metabolic byproduct of intestinal bacteria.

## REFERENCES

- Bélanger, A., Hum, D.W., Beaulieu, M., Lévesque, E., Guillemette, C., Tchernof, A., Bélanger, G., Turgeon, D. and Dubois, S. 1998. Characterization and regulation of UDP-glucuronosyltransferases in steroid target tissues. *J. Steroid Biochem. Mol. Biol.* 65: 301-310.
- Lévesque, E., Beaulieu, M., Hum, D.W. and Bélanger, A. 1999. Characterization and substrate specificity of UGT2B4 (E458): a UDP-glucuronosyltransferase encoded by a polymorphic gene. *Pharmacogenetics* 9: 207-216.
- King, C.D., Rios, G.R., Green, M.D. and Tephly, T.R. 2000. UDP-glucuronosyltransferases. *Curr. Drug Metab.* 1: 143-161.
- Mackenzie, P.I., Bock, K.W., Burchell, B., Guillemette, C., Ikushiro, S., Iyanagi, T., Miners, J.O., Owens, I.S. and Nebert, D.W. 2005. Nomenclature update for the mammalian UDP glycosyltransferase (UGT) gene superfamily. *Pharmacogenet. Genomics* 15: 677-685.
- Buckley, D.B. and Klaassen, C.D. 2007. Tissue- and gender-specific mRNA expression of UDP-glucuronosyltransferases (UGTs) in mice. *Drug Metab. Dispos.* 35: 121-127.
- Argikar, U.A., Iwuchukwu, O.F. and Nagar, S. 2008. Update on tools for evaluation of uridine diphosphoglucuronosyltransferase polymorphisms. *Expert Opin. Drug Metab. Toxicol.* 4: 879-894.
- Mackenzie, P.I., Rogers, A., Treloar, J., Jorgensen, B.R., Miners, J.O. and Meech, R. 2008. Identification of UDP glycosyltransferase 3A1 as a UDP N-acetylglucosaminyltransferase. *J. Biol. Chem.* 283: 36205-36210.

## CHROMOSOMAL LOCATION

Genetic locus: UGT3A2 (human) mapping to 5p13.2.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

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

## SOURCE

UGT3A2 (O-22) is a Protein A purified rabbit polyclonal antibody raised against synthetic UGT3A2 peptide of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## APPLICATIONS

UGT3A2 (O-22) is recommended for detection of UGT3A2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for UGT3A2 siRNA (h): sc-91750, UGT3A2 shRNA Plasmid (h): sc-91750-SH and UGT3A2 shRNA (h) Lentiviral Particles: sc-91750-V.

Molecular Weight of UGT3A2: 60 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## PROTOCOLS

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