

UGT3A1 (K-15): sc-244575

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 extent, in the gastrointestinal tract. UGT3A1 (UDP glycosyltransferase 3 family, polypeptide A1) 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

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2. Lévesque, E., et al. 1999. Characterization and substrate specificity of UGT2B4 (E458): a UDP-glucuronosyltransferase encoded by a polymorphic gene. *Pharmacogenetics* 9: 207-216.
3. King, C.D., et al. 2000. UDP-glucuronosyltransferases. *Curr. Drug Metab.* 1: 143-161.
4. Mackenzie, P.I., et al. 2005. Nomenclature update for the mammalian UDP glycosyltransferase (UGT) gene superfamily. *Pharmacogenet. Genomics* 15: 677-685.
5. Buckley, D.B., et al. 2007. Tissue- and gender-specific mRNA expression of UDP-glucuronosyltransferases (UGTs) in mice. *Drug Metab. Dispos.* 35: 121-127.
6. Argikar, U.A., et al. 2008. Update on tools for evaluation of uridine diphosphoglucuronosyltransferase polymorphisms. *Expert. Opin. Drug Metab. Toxicol.* 4: 879-894.
7. Mackenzie, P.I., et al. 2008. Identification of UDP glycosyltransferase 3A1 as a UDP N-acetylglucosaminyltransferase. *J. Biol. Chem.* 283: 36205-36210.

CHROMOSOMAL LOCATION

Genetic locus: *Ugt3a1* (mouse) mapping to 15 A1.

SOURCE

UGT3A1 (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of UGT3A1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-244575 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

UGT3A1 (K-15) is recommended for detection of UGT3A1 of mouse and rat 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for UGT3A1 siRNA (m): sc-154906, UGT3A1 shRNA Plasmid (m): sc-154906-SH and UGT3A1 shRNA (m) Lentiviral Particles: sc-154906-V.

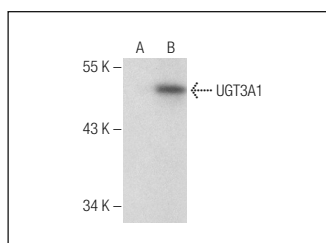
Molecular Weight of UGT3A1: 59 kDa.

Positive Controls: UGT3A1 (m): 293T Lysate: sc-124459.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



UGT3A1 (K-15): sc-244575. Western blot analysis of UGT3A1 expression in non-transfected: sc-117752 (A) and mouse UGT3A1 transfected: sc-124459 (B) 293T whole cell lysates.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.