

UGT1A6 (P-16): sc-27431

BACKGROUND

Glucuronidation, an important bile acid detoxification pathway, is catalyzed by enzymes belonging to the UDP-glucuronosyltransferase (UGT) superfamily. UGT genes are classified into the UGT1A and UGT2B subfamilies. Although each subfamily and each isoform shows tissue-specific patterns of distribution, the underlying mechanisms for this tissue specificity have not been fully elucidated. The human UDP-glucuronosyltransferase 1 (UGT1) locus encodes at least ten UGT1A proteins (UGT1A1-UGT1A10) that play a prominent role in drug and xenobiotic metabolism. Research indicates that nuclear receptors such as pregnane X receptor (PXR), constitutive androstane receptor (CAR) and peroxisome proliferator-activated receptor (PPAR) can regulate UGTs, which may contribute to the tissue-specific expression pattern of UGTs. Deficiency in the expression and/or activity of UGTs may lead to genetic and acquired diseases such as Crigler-Najjar syndrome and Gilbert syndrome. Based on their ability to catalyze the glucuronidation of xenobiotics and endobiotics, UGTs play a critical role in hormonal homeostasis, energy metabolism, bilirubin clearance and xenobiotic detoxification.

REFERENCES

1. Moghrabi, N., et al. 1992. Chromosomal assignment of human phenol and bilirubin UDP-glucuronosyltransferase genes (UGT1A-subfamily). *Hum. Genet.* 56: 81-91.
2. Owens, I.S., et al. 1996. The novel UGT1 gene complex links bilirubin, xenobiotics, and therapeutic drug metabolism by encoding UDP-glucuronosyltransferase isozymes with a common carboxyl terminus. *J. Pharmacokinet. Biopharm.* 24: 491-508.
3. Ciotti, M., et al. 1997. Genetic defects at the UGT1 locus associated with Crigler-Najjar type I disease, including a prenatal diagnosis. *Am. J. Med. Genet.* 68: 173-178.
4. Strassburg, C.P., et al. 1997. Differential down-regulation of the UDP-glucuronosyltransferase 1A locus is an early event in human liver and biliary cancer. *Cancer Res.* 57: 2979-2985.
5. Thomas, S.S., et al. 2006. Genetic variability, haplotypes, and htSNPs for exons 1 at the human UGT1A locus. *Hum. Mutat.* 27: 717.
6. Han, J.Y., et al. 2006. Comprehensive analysis of UGT1A polymorphisms predictive for pharmacokinetics and treatment outcome in patients with non-small-cell lung cancer treated with irinotecan and cisplatin. *J. Clin. Oncol.* 24: 2237-2244.

CHROMOSOMAL LOCATION

Genetic locus: UGT1A6 (human) mapping to 2q37.1.

SOURCE

UGT1A6 (P-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of UGT1A6 of human origin.

STORAGE

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

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-27431 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

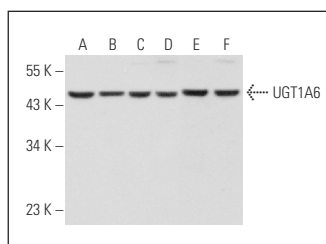
UGT1A6 (P-16) is recommended for detection of UGT1A6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 UGT1A6 siRNA (h): sc-44474, UGT1A6 shRNA Plasmid (h): sc-44474-SH and UGT1A6 shRNA (h) Lentiviral Particles: sc-44474-V.

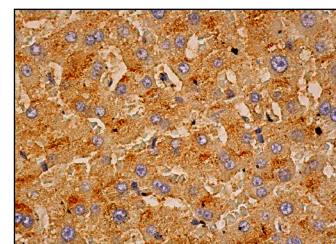
Molecular Weight of UGT1A6: 54 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, Hep G2 cell lysate: sc-2227 or A-431 whole cell lysate: sc-2201.

DATA



UGT1A6 (P-16): sc-27431. Western blot analysis of UGT1A6 expression in Caki-1 (A), A-431 (B), HEK293 (C), Hep G2 (D), C32 (E) and COLO 320DM (F) whole cell lysates.



UGT1A6 (P-16): sc-27431. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

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.



Try **UGT1A (B-4): sc-271268** or **UGT1A6 (C-12): sc-514913**, our highly recommended monoclonal alternatives to UGT1A6 (P-16). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **UGT1A (B-4): sc-271268**.