

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Glucuronosyltransferase 1A1/UGT1A1 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Glucuronosyltransferase 1A1/UGT1A1 Leu60-Thr168 Accession # P22309
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

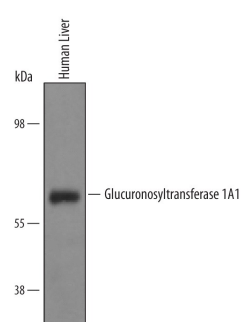
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

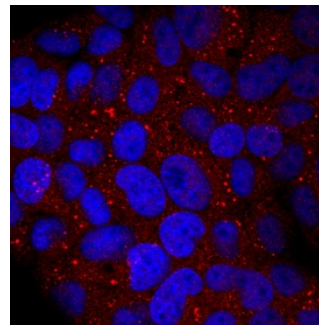
DATA

Western Blot



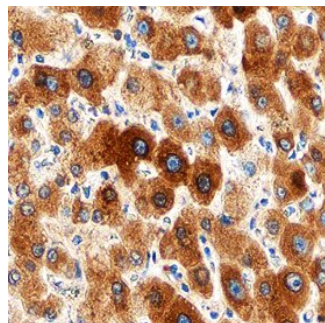
Detection of Human Glucuronosyltransferase 1A1/UGT1A1 by Western Blot. Western blot shows lysates of human liver tissue. PVDF Membrane was probed with 1 µg/mL of Goat Anti-Human Glucuronosyltransferase 1A1/UGT1A1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6490) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for Glucuronosyltransferase 1A1/UGT1A1 at approximately 57 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

Immunocytochemistry



Glucuronosyltransferase 1A1/UGT1A1 in HepG2 Human Cell Line. Glucuronosyltransferase 1A1/UGT1A1 was detected in immersion fixed HepG2 human hepatocellular carcinoma cell line using Goat Anti-Human Glucuronosyltransferase 1A1/UGT1A1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6490) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Immunohistochemistry



Glucuronosyltransferase 1A1/UGT1A1 in Human Liver. Glucuronosyltransferase 1A1/UGT1A1 was detected in immersion fixed paraffin-embedded sections of human liver using Goat Anti-Human Glucuronosyltransferase 1A1/UGT1A1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6490) at 3 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in hepatocytes. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

UGT1A1 (UDP-glucuronosyltransferase 1-A1; also UDPGT 1-1 and HUG-BR1) is a 52-57 kDa member of the UGT1A subfamily, UGT family of enzymes. UGT1A1 is expressed by the liver, and catalyzes the conjugation of glucuronic acid (GA) from UDPGA to lipophilic acceptors such as (anti-cancer) drugs and bilirubin. Addition of glucuronic acid increases target solubility and facilitates elimination. Mature human UGT1A1 is a 508 amino acid (aa) type I transmembrane ER glycoprotein. It contains a 465 aa luminal domain (aa 26-490) plus a 26 aa cytoplasmic region. The luminal domain is unusual in that aa 157-176 are embedded in the ER membrane. Amino acids 29-444 contain the enzyme active site. The cytoplasmic tail appears to mediate noncovalent homodimerization, and heterodimerization with UGT2B. The signal sequence (aa 1-25) is normally cleaved, but a Lys15Arg mutation blocks insertion into the ER membrane. There are multiple point mutations that impact enzyme activity. One potential splice form is reported that shows a six aa substitution for aa 289-533. Over aa 60-186, human UGT1A1 shares 64% aa identity with mouse UGT1A1.