

DESCRIPTION

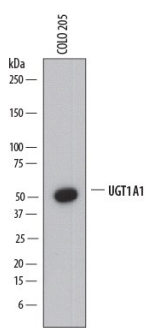
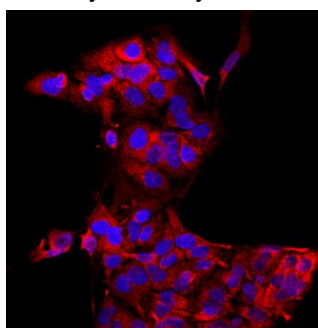
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| Species Reactivity | Human |
| Specificity | Detects human Glucuronosyltransferase 1A1/UGT1A1 in ELISAs. |
| Source | Monoclonal Mouse IgG ₁ Clone # 856754 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Immunogen | <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. |

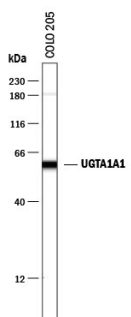

APPLICATIONS

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 | 2 µg/mL | See Below |
| Immunocytochemistry | 8-25 µg/mL | See Below |
| Simple Western | 20 µg/mL | See Below |

DATA

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| <p>Western Blot</p>  <p>Detection of Human Glucuronosyltransferase 1A1/UGT1A1 by Western Blot. Western blot shows lysates of COLO 205 human colorectal adenocarcinoma cell line. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human Glucuronosyltransferase 1A1/UGT1A1 Monoclonal Antibody (Catalog # MAB6490) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Glucuronosyltransferase 1A1/UGT1A1 at approximately 50 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p> | <p>Immunocytochemistry</p>  <p>Glucuronosyltransferase 1A1/UGT1A1 in HepG2 Human Cell Line. Glucuronosyltransferase 1A1/UGT1A1 was detected in immersion fixed HepG2 human hepatocellular carcinoma cell line using Mouse Anti-Human Glucuronosyltransferase 1A1/UGT1A1 Monoclonal Antibody (Catalog # MAB6490) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p> |
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| <p>Simple Western</p>  <p>Detection of Human Glucuronosyltransferase 1A1/UGT1A1 by Simple Western™. Simple Western lane view shows lysates of COLO 205 human colorectal adenocarcinoma cell line, loaded at 0.5 mg/mL. A specific band was detected for Glucuronosyltransferase 1A1/UGT1A1 at approximately 59 kDa (as indicated) using 20 µg/mL of Mouse Anti-Human Glucuronosyltransferase 1A1/UGT1A1 Monoclonal Antibody (Catalog # MAB6490). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.</p>  |
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PREPARATION AND STORAGE

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| Reconstitution | Sterile PBS to a final concentration of 0.5 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.