

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
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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.

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