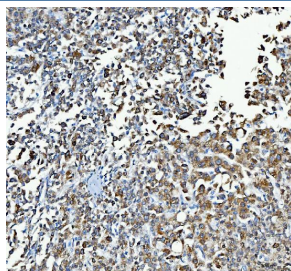


UGT1A1 Antibody / Drug Metabolism Enzyme Antibody (RQ4094)

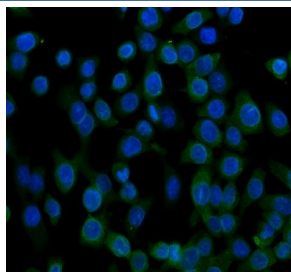
Catalog No.	Formulation	Size
RQ4094	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

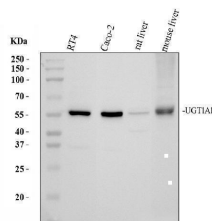
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P22309
Localization	Cytoplasmic
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml Direct ELISA : 0.1-0.5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This UGT1A1 Antibody / Drug Metabolism Enzyme Antibody is available for research use only.



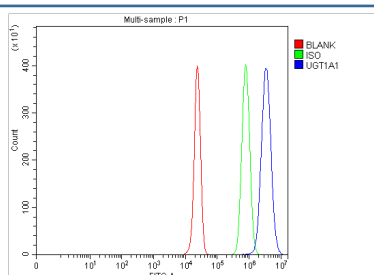
UGT1A1 Antibody / Drug Metabolism Enzyme Antibody Human Liver Cancer IHC. Immunohistochemical staining of FFPE human liver cancer tissue using UGT1A1 Antibody / Drug Metabolism Enzyme Antibody. UGT1A1 expression is detected predominantly within the cytoplasm of tumor cells, consistent with its role as a Phase II metabolic enzyme that catalyzes bilirubin conjugation and glucuronidation of endogenous compounds, xenobiotics, and therapeutic drugs. Heat-induced epitope retrieval was performed in pH 8.0 EDTA buffer prior to staining. Tissue sections were blocked with 10% goat serum and incubated with the primary antibody (2 ug/ml) overnight at 4°C, followed by a peroxidase-conjugated goat anti-rabbit IgG secondary antibody. Immunoreactivity was visualized using an HRP Super Vision detection system with DAB as the chromogen.



UGT1A1 Antibody / Drug Metabolism Enzyme Antibody CACO-2 Immunofluorescence. Immunofluorescent staining of CACO-2 cells using UGT1A1 Antibody / Drug Metabolism Enzyme Antibody (green) with DAPI nuclear counterstain (blue). Enzymatic antigen retrieval was performed for 15 minutes prior to staining. Cells were blocked with 10% goat serum and incubated with the primary antibody (5 ug/ml) overnight at 4°C, followed by a Fluoro488-conjugated goat anti-rabbit IgG secondary antibody. UGT1A1 displays predominantly cytoplasmic staining, consistent with its localization as a Phase II metabolic enzyme involved in bilirubin conjugation, glucuronidation, and the detoxification of endogenous compounds and therapeutic drugs.



UGT1A1 Antibody / Drug Metabolism Enzyme Antibody Human, Mouse and Rat WB. Western blot analysis of 1) human RT4, 2) human CACO-2, 3) rat liver, and 4) mouse liver lysates using UGT1A1 Antibody / Drug Metabolism Enzyme Antibody. A specific immunoreactive band is detected at approximately 55 kDa in all tested samples, consistent with UGT1A1 expression. The predicted molecular weight of UGT1A1 is approximately 60 kDa. These results demonstrate reliable detection of UGT1A1, a major Phase II metabolic enzyme responsible for bilirubin conjugation, glucuronidation, and the detoxification of endogenous compounds, xenobiotics, and therapeutic drugs.



UGT1A1 Antibody / Drug Metabolism Enzyme Antibody HepG2 Flow Cytometry. Flow cytometric analysis of fixed and permeabilized human HepG2 cells using UGT1A1 Antibody / Drug Metabolism Enzyme Antibody at 1 ug/10⁶ cells. Cells were fixed with 4% paraformaldehyde, permeabilized, and blocked with 10% normal goat serum prior to staining. Red: unstained cells. Green: rabbit IgG isotype control. Blue: UGT1A1 antibody. The distinct rightward shift of the UGT1A1 antibody signal relative to the isotype control demonstrates specific intracellular detection of UGT1A1 in HepG2 cells.

Description

UGT1A1 Antibody / Drug Metabolism Enzyme Antibody recognizes UDP glucuronosyltransferase family 1 member A1 (UGT1A1), a major Phase II metabolic enzyme responsible for the glucuronidation of bilirubin, therapeutic drugs, environmental chemicals, and numerous endogenous compounds. By catalyzing the transfer of glucuronic acid to lipophilic substrates, UGT1A1 increases their water solubility and facilitates elimination through bile or urine. This activity is essential for hepatic detoxification and metabolic homeostasis, making UGT1A1 Antibody / Drug Metabolism Enzyme Antibody a valuable tool for studies of liver biology, pharmacology, toxicology, and precision medicine.

UGT1A1 is expressed primarily in hepatocytes, with additional expression in the gastrointestinal tract and selected extrahepatic tissues. The enzyme plays a critical role in bilirubin metabolism by converting unconjugated bilirubin into conjugated bilirubin for excretion. Beyond bilirubin clearance, UGT1A1 glucuronidates numerous xenobiotics, steroid hormones, dietary compounds, and prescription medications, thereby regulating drug disposition and protecting tissues from the accumulation of potentially toxic metabolites. Because glucuronidation represents one of the principal mechanisms of Phase II metabolism, UGT1A1 is a central component of the body's detoxification system.

Inherited variants of the UGT1A1 gene are responsible for disorders including Gilbert syndrome and Crigler-Najjar syndrome, both characterized by impaired bilirubin conjugation and hyperbilirubinemia. UGT1A1 polymorphisms also have major pharmacogenomic significance by influencing the metabolism of irinotecan and numerous other therapeutic agents, affecting drug efficacy and the risk of treatment-related toxicity. Consequently, UGT1A1 has become an important biomarker in clinical pharmacology, oncology, personalized medicine, and studies of liver disease.

NSJ Bioreagents' UGT1A1 Antibody / Drug Metabolism Enzyme Antibody supports investigations into glucuronidation, bilirubin metabolism, hepatic detoxification, xenobiotic metabolism, pharmacogenomics, liver physiology, and Phase II metabolic pathways. Reliable detection of UGT1A1 enables researchers to study one of the body's most important drug-

metabolizing enzymes and its essential role in maintaining metabolic homeostasis.

Explore additional antibodies involved in drug metabolism, detoxification, and metabolic enzyme pathways on our [Metabolism Antibodies](#) page.

Application Notes

Optimal dilution of the UGT1A1 Antibody / Drug Metabolism Enzyme Antibody should be determined by the researcher.

Immunogen

A recombinant human partial protein corresponding to amino acids E316-H533 was used as the immunogen for the UGT1A1 antibody.

Storage

After reconstitution, the UGT1A1 antibody can be stored for up to one month at 4°C. For long-term, aliquot and store at -20°C. Avoid repeated freezing and thawing.

Alternate Names

UGT1A1 antibody, UDP Glucuronosyltransferase 1A1 antibody, Bilirubin UDP Glucuronosyltransferase antibody, Drug Metabolism Enzyme antibody, Phase II Metabolism Enzyme antibody, Glucuronosyltransferase 1A1 antibody