**Applications** 

• WB



# **UGT1A1** Rabbit pAb

CatalogNo: YN3845

# **| Key Features**

Host Species Reactivity

Rabbit
 Human, Mouse, Rat

MW Isotype
• 59kD (Calculated) • IgG

### **Recommended Dilution Ratios**

WB 1:500-2000

### Storage

**Storage\*** -15°C to -25°C/1 year(Do not lower than -25°C)

**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

### **Basic Information**

**Clonality** Polyclonal

## Immunogen Information

**Immunogen** Synthesized peptide derived from human UD11 AA range: 36-86

**Specificity** This antibody detects endogenous levels of UD11 at Human/Mouse/Rat

### | Target Information

Gene name UGT1A1 GNT1 UGT1

#### **Protein Name**

UDP-glucuronosyltransferase 1A1

Organism	Gene ID	UniProt ID
Human	<u>54658</u> ;	<u>P22309;</u>
Mouse	<u>394436;</u>	<u>Q63886;</u>
Rat	<u>24861</u> ;	<u>Q64550</u> ;

### Cellular Localization

Endoplasmic reticulum membrane ; Single-pass membrane protein . Cytoplasm, perinuclear region .

Tissue specificity [Isoform 1]: Expressed in liver, colon and small intestine. Not expressed in kidney, esophagus and skin.; [Isoform 2]: Expressed in liver, colon, small intestine and kidney. Not expressed in esophagus and skin.

#### **Function**

Alternative products: A number of isoforms are produced. The different isozymes have a different N-terminal domain and a common C-terminal domain of 245 residues, Alternative products: A number of isoforms may be produced. Isoforms have a different N-terminal domain and a common C-terminal domain of 245 residues, Catalytic activity: UDP-glucuronate + acceptor = UDP + acceptor beta-D-glucuronoside., Caution: The sequence shown here is derived from an Ensembl automatic analysis pipeline and should be considered as preliminary data., Disease: Defects in UGT1A1 are the cause of Crigler-Najjar syndrome type I (CN-I) [MIM:218800]. CN-I patients have severe hyperbilirubinemia and usually die of kernicterus (bilirubin accumulation in the basal ganglia and brainstem nuclei) within the first year of life. CN-I inheritance is autosomal recessive., Disease: Defects in UGT1A1 are the cause of Crigler-Najjar syndrome type II (CN-II) [MIM:606785]. CN-II patients have less severe hyperbilirubinemia and usually survive into adulthood without neurologic damage. Phenobarbital, which induces the partially deficient glucuronyl transferase, can diminish the jaundice. CN-II inheritance is autosomal dominant., Disease: Defects in UGT1A1 are the cause of Gilbert syndrome [MIM:143500]. Gilbert syndrome occurs as a consequence of reduced bilirubin transferase activity and is often detected in young adults with vague nonspecific complaints., Disease: Defects in UGT1A1 may be a cause of transient familial neonatal hyperbilirubinemia [MIM:237900]. The defects is characterized by excessive concentration of bilirubin in the blood, which may lead to jaundice. Breast milk jaundice is a common problem in nursing infants. It has been ascribed to various breast milk substances, but the component or combination of components that is responsible remains unclear. Defects of UGT1A1 are an underlying cause of the prolonged unconjugated hyperbilirubinemia associated with breast milk. One or more components in the milk may trigger the jaundice in infants who have such mutations. Mutations are identical to those detected in patients with Gilbert syndrome [MIM:143500], a risk factor of neonatal non-physiologic hyperbilirubinemia and a genetic factor in fasting hyperbilirubinemia.,Disease:The Gilbert syndrome is shown to occur as a consequence of reduced bilirubin transferase activity. The disorder, is most often detected in voung adults with vague nonspecific complaints. A more severe inheritable deficiency in bilirubin activity exist in Crigler-Najjar (CN): patients with type I (recessive trait) have severe hyperbilirubinemia and usually die of kernicterus (bilirubin accumulation in the basal ganglia and brainstem nuclei) within the first year of life. Patients with type II (dominant trait) have less severe hyperbilirubinemia and usually survive into adulthood without neurologic damage. Phenobarbital, which induces the partially deficient glucuronyl transferase, can diminish the jaundice., Function: UDPGT is of major importance in the conjugation and subsequent elimination of potentially toxic xenobiotics and endogenous compounds., Function: UDPGT is of major importance in the conjugation and subsequent elimination of potentially toxic xenobiotics and endogenous compounds. This isoform glucuronidates bilirubin IX-alpha to form both the IX-alpha-C8 and IX-alpha-C12 monoconjugates and diconjugate., Function: UDPGT is of major importance in the conjugation and subsequent elimination of potentially toxic xenobiotics and endogenous compounds. This isoform has specificity for phenols.,induction:By phenobarbital.,online information:Glucuronosyltransferase entry,polymorphism:Polymorphisms in the UGT1A6 gene define four common haplotypes: UGT1A6\*1, UGT1A6\*2, UGT1A6\*3 and UGT1A6\*4. Liver tissue samples that were homozygous for UGT1A6\*2 exhibited a high rate of glucuronidation relative to tissues with other genotypes. Biochemical kinetic studies indicate that the UGT1A6\*2 allozyme, expressed homozygously, had almost two-fold greater activity toward p-nitrophenol than UGT1A6\*1 and when expressed heterozygously (UGT1A6\*1/\*2) it is associated with low enzyme activity. Common genetic variation in UGT1A6 confers functionally significant differences in biochemical phenotype. This genetic variation might impact clinical efficacy or toxicity of drugs metabolized by UGT1A6.,polymorphism:There are four common allelic UGT1A7 variants which exhibit significant differences in catalytic activity towards 3-, 7-, and 9-hydroxybenzo(a)pyrene. UGT1A7\*3 exhibits a 5.8-fold lower relative Vmax compared to UGT1A7\*1, whereas UGT1A7\*2 and UGT1A7\*4 have a 2.6- and 2.8-fold lower relative Vmax than UGT1A7\*1, respectively, suggesting that these mutations confer slow glucuronidation phenotype., similarity: Belongs to the UDP-glycosyltransferase family., subunit: Part a large chaperone multiprotein complex comprising CABP1, DNA|B11, HSP90B1, HSPA5, HYOU, PDIA2, PDIA4, PPIB, SDF2L1, UGT1A1 and very small amounts of ERP29, but not, or at very low levels, CALR nor CANX., tissue specificity: Colon specific., tissue specificity: Expressed in liver. Not expressed in skin or kidney., tissue specificity: Expressed in skin, kidney and liver., tissue specificity:Liver and colon., tissue specificity:Liver and gastric tissue., tissue specificity:Liver.,

### **Validation Data**

### | Contact information

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Please scan the QR code to access additional product information: **UGT1A1 Rabbit pAb** 

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