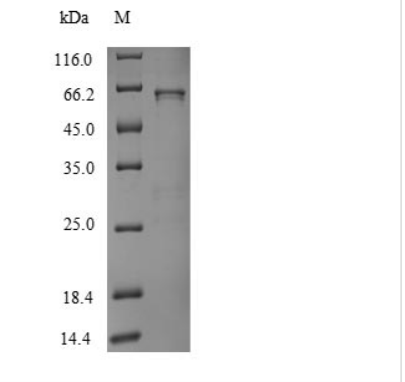
Recombinant Human UDP-glucuronosyltransferase 1A1 (UGT1A1)

Product Code	CSB-YP025570HU
Relevance	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. Is also able to catalyze the glucuronidation of 17beta-estradiol, 17alpha-ethinylestradiol, 1-hydroxypyrene, 4-methylumbelliferone, 1-naphthol, paranitrophenol, scopoletin, and umbelliferone. Isoform 2 lacks transferase activity but acts as a negative regulator of isoform 1.
Abbreviation	Recombinant Human UGT1A1 protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P22309
Product Type	Recombinant Proteins
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	HAGKILLIPVDGSHWLSMLGAIQQLQQRGHEIVVLAPDASLYIRDGAFYTLKTYP VPFQREDVKESFVSLGHNVFENDSFLQRVIKTYKKIKKDSAMLLSGCSHLLHNK ELMASLAESSFDVMLTDPFLPCSPIVAQYLSLPTVFFLHALPCSLEFEATQCPN PFSYVPRPLSSHSDHMTFLQRVKNMLIAFSQNFLCDVVYSPYATLASEFLQRE VTVQDLLSSASVWLFRSDFVKDYPRPIMPNMVFVGGINCLHQNPLSQEFEAYI NASGEHGIVVFSLGSMVSEIPEKKAMAIADALGKIPQTVLWRYTGTRPSNLANN TILVKWLPQNDLLGHPMTRAFITHAGSHGVYESICNGVPMVMMPLFGDQMDN AKRMETKGAGVTLNVLEMTSEDLENALKAVINDKSYKENIMRLSSLHKDRPVE PLDLAVFWVEFVMRHKGAPHLRPAAHDLTWYQYHSLDVIGFLLAVVLTVAFITF KCCAYGYRKCLGKKGRVKKAHKSKTH
Research Area	Metabolism
Source	Yeast
Target Names	UGT1A1
Protein Names	Recommended name: UDP-glucuronosyltransferase 1-1 Short name= UDPGT 1-1 Short name= UGT1*1 Short name= UGT1-01 Short name= UGT1.1 EC= 2.4.1.17Alternative name(s): Bilirubin-specific UDPGT isozyme 1 Short name= hUG
Expression Region	26-533aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

Tag Info	N-terminal 6xHis-tagged
Mol. Weight	59.1kDa
Protein Length	Full Length of Mature Protein

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The preparation of Recombinant Human UGT1A1 protein included 3 main steps: construct the expression vector, expression of protein of interest, and protein purification. Every step was performed under a strict QC system so that we got the premium protein. This UGT1A1 was expressed in Yeast at and fused with N-terminal 6xHis tag. According to SDS-PAGE, the purity turns out to be 90%+.

UGT1A1 is the main enzyme responsible for the inactivation of SN38. UGT1A1 protein has the highest ability to glucuronidate SN-38. Various studies have demonstrated a relationship between UGT1A1 genotypes affecting SN-38 pharmacokinetics and the experienced toxicity. Mutations in the UGT1A1 gene have been implicated in Gilbert's syndrome, which shows mild hyperbilirubinemia, and a more aggressive childhood subtype, Crigler-Najjar syndrome. Several genetic variants within the UGT1A1 gene are known to be associated with reduced UGT1A1 enzyme activity and, therefore, with an increased risk for irinotecan-related severe toxicity. The most well-characterized UGT1A1 genetic variants are UGT1A1*28 and UGT1A1*6. UGT1A1*28 is a common tandem-repeat polymorphism in the promotor region of the UGT1A1 gene that leads to reduced enzyme activity, which is also known as Gilbert's syndrome.

Shelf Life

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