Rat UDP-glucumno-syltransferase 1(UGT1) ELISA Kit

Product Code	CSB-E13845r
Abbreviation	UGT1A1
Target Name	UDP glucuronosyltransferase 1 family, polypeptide A1
Uniprot No.	Q64550
Alias	GNT1, HUG-BR1, UDPGT, UGT1, UGT1A, UDP glucuronosyltransferase 1A1|UDP glycosyltransferase 1 family, polypeptide A1|bilirubin UDP-glucuronosyltransferase 1-1|bilirubin UDP-glucuronosyltransferase is
Product Type	ELISA Kit
Immunogen Species	Rattus norvegicus (Rat)
Sample Types	serum, plasma, tissue homogenates
Detection Range	31.2 pg/mL-2000 pg/mL
Sensitivity	7.8 pg/mL
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Metabolism
Gene Names	Ugt1a1
Tag Info	quantitative
Protein Description	Sandwich

Description

The Rat UDP-glucuronosyltransferase 1(UGT1) ELISA Kit is designed for reliable and accurate quantification of UGT1 levels in rat serum, plasma, and tissue homogenates.

The UGT1 enzyme, also known as UDP-glucuronosyltransferase 1A1 (UGT1A1) is a key player in the metabolism of drugs and toxins in the liver, making it an essential target for research in the field of metabolism. This kit has a wide detection range of 31.2 pg/mL to 2000 pg/mL with a sensitivity of 7.8 pg/mL, allowing for precise measurement of UGT1 levels in various samples.

With an assay time of only 1-5 hours and a sample volume of 50-100ul, this kit is efficient and convenient for high-throughput screening. The detection wavelength is 450 nm and the assay principle is quantitative, utilizing the sandwich method for accurate and specific detection of UGT1.

This ELISA kit is ideal for researchers working in the field of metabolism and drug development. Trust in our reliable and validated Rat UGT1 ELISA Kit to facilitate your research and drive new discoveries.

Target Details

This gene encodes a UDP-glucuronosyltransferase, an enzyme of the glucuronidation pathway that transforms small lipophilic molecules, such as steroids, bilirubin, hormones, and drugs, into water-soluble, excretable metabolites. This gene is part of a complex locus that encodes several UDP-glucuronosyltransferases. The locus includes thirteen unique alternate first exons followed by four common exons. Four of the alternate first exons are considered pseudogenes. Each of the remaining nine 5 exons may be spliced to the four common exons, resulting in nine proteins with different N-termini and identical C-termini. Each first exon encodes the substrate binding site, and is regulated by its own promoter. The preferred substrate of this enzyme is bilirubin, although it also has moderate activity with simple phenols, flavones, and C18 steroids. Mutations in this gene result in Crigler-Najjar syndromes types I and II and in Gilbert syndrome.

Product Precision

Intra-assay Precision (Precision within an assay): CV%<8%

Three samples of known concentration were tested twenty times on one plate to assess.

Inter-assay Precision (Precision between assays): CV%<10%

Three samples of known concentration were tested in twenty assays to assess.

Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of rat UGT1 in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

?	Sample	Serum(n=4)
1:1	Average %	87
	Range %	82-91
1:2	Average %	94
	Range %	89-98
1:4	Average %	107
	Range %	103-110
1:8	Average %	110
	Range %	104-114

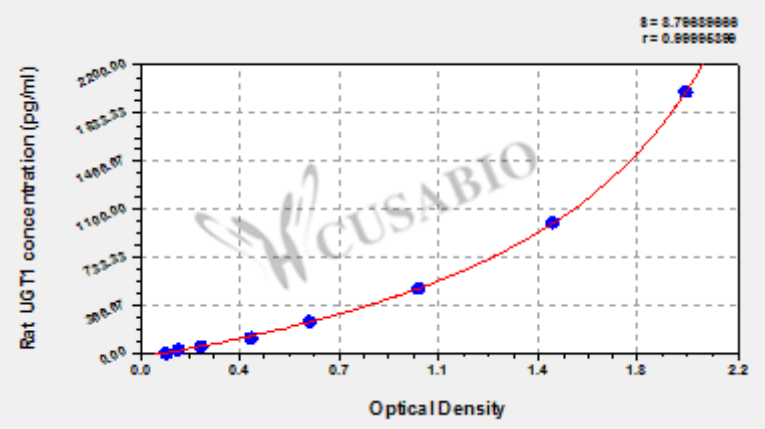
Recovery

The recovery of rat UGT1 spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

Sample Type	Average % Recovery	Range
Serum (n=5)	95	91-99
EDTA plasma (n=4)	103	98-108

Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



pg/ml	OD1	OD2	Average	Corrected
2000	1.941	2.014	1.978	1.875
1000	1.503	1.498	1.501	1.398
500	0.999	1.031	1.015	0.912
250	0.610	0.631	0.621	0.518
125	0.417	0.407	0.412	0.309
62.5	0.235	0.228	0.232	0.129
31.25	0.148	0.150	0.149	0.046
0	0.101	0.104	0.103	?

Msds

{"0":{"fileurl":"https://www.cusabio.com/uploadfile/msds/MSDS CSB-E13845r.pdf","filename":"MSDS"}}