Human Glutathione peroxidase 1(GPX1) ELISA kit

Product Code	CSB-EL009866HU
Abbreviation	GPX1
Target Name	glutathione peroxidase 1
Uniprot No.	P07203
Alias	GSHPX1, MGC14399, MGC88245, OTTHUMP00000210766|cellular glutathione peroxidase
Product Type	ELISA Kit
Immunogen Species	Homo sapiens (Human)
Sample Types	serum, plasma, tissue homogenates
Detection Range	15.6 μU/mL-1000 μU/mL
Sensitivity	3.9 μU/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	Cancer
Gene Names	GPX1
Tag Info	quantitative
Protein Description	Sandwich

Description

The Human Glutathione peroxidase 1 (GPX1) ELISA kit is suitable for researchers working with human samples. This kit is created to quantitatively measure GPX1 levels in serum, plasma, and tissue homogenates. It can measure GPX1 levels ranging from 15.6 μU/mL to 1000 μU/mL. The sensitivity of the detection is 3.9 μU/mL. The assay is conducted using a sandwich method, namely the GPX1 protein in the sample is captured by capture antibodies and detection antibodies. The assay time ranges from 1 to 5 hours, making it efficient for high-throughput experiments. A small sample volume of 50-100 μl is required for analysis. The detection wavelength is set at 450 nm, optimizing the detection of GPX1 levels in the samples. This ELISA kit has been utilized in more than 10 research papers, showcasing its widespread acceptance and reliability in the scientific community. The kit's ability to accurately measure GPX1 levels has contributed to advancing the understanding of the role of this enzyme in GPX1-associated studies including diabetes, oxidative stress, and cancer.

Target Details

This gene encodes a member of the glutathione peroxidase family. Glutathione peroxidase functions in the detoxification of hydrogen peroxide, and is one of the most important antioxidant enzymes in humans. This protein is one of only a few proteins known in higher vertebrates to contain selenocysteine, which occurs at the active site of glutathione peroxidase and is coded by UGA, that normally functions as a translation termination codon. In addition, this protein is characterized in a polyalanine sequence polymorphism in the N-terminal region, which includes three alleles with five, six or seven alanine (ALA) repeats in this sequence. The allele with five ALA repeats is significantly associated with breast cancer risk. Two alternatively spliced transcript variants encoding distinct isoforms have been found for this gene.

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 human GPX1 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)
1:200	Average %	91
	Range %	88-94
1:400	Average %	105
	Range %	100-107
1:800	Average %	94
	Range %	89-97
1:1600	Average %	98
	Range %	94-103

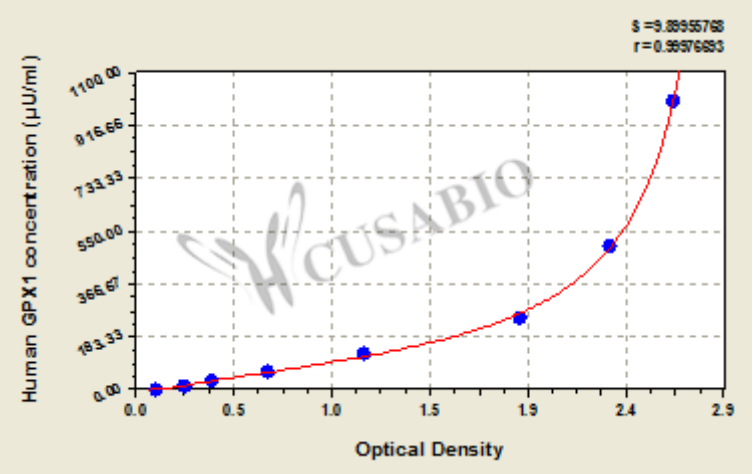
Recovery

The recovery of human GPX1 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	90-98
EDTA plasma (n=4)	95	91-98

Typical

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



µU/ml	OD1	OD2	Average	Corrected
1000	2.668	2.645	2.657	2.544
500	2.355	2.333	2.344	2.231
250	1.914	1.887	1.901	1.788
125	1.123	1.145	1.134	1.021
62.5	0.656	0.667	0.662	0.549
31.25	0.378	0.390	0.384	0.271
15.6	0.261	0.243	0.252	0.139
0	0.115	0.111	0.113	?

Msds

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