Human peroxisome proliferative activated receptor gama coactivator 1 alpha,PPARGC1 ELISA Kit

Product Code	CSB-E11761h
Abbreviation	PPARGC1A
Protein Biological Process 1	Transcription/Transcription regulation
Target Name	peroxisome proliferator-activated receptor gamma, coactivator 1 alpha
Uniprot No.	Q9UBK2
Alias	LEM6, PGC-1(alpha), PGC-1v, PGC1, PGC1A, PPARGC1, PPAR gamma coactivator variant form|PPAR gamma coactivator-1|ligand effect modulator-6|peroxisome proliferative activated receptor, gamma, coactivat
Product Type	ELISA Kit
Immunogen Species	Homo sapiens (Human)
Protein Biological Process 3	Transcription
Sample Types	serum, plasma, cell culture supernates, cell lysates
Detection Range	125 pg/mL-8000 pg/mL
Sensitivity	31.25 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	PPARGC1A
Tag Info	quantitative
Protein Description	Sandwich
Description	This human PPARGC1A ELISA kit employs the quantitative sandwich enzyme immunoassay technique to measure the levels of human PPARGC1A in different samples, including serum, plasma, cell culture supernates, or cell lysates. The enzyme-substrate chromogenic reaction is also used to amplify the signal and quantify the levels of the analyte through the intensity of the colored product. The color intensity positively correlates with the amount of PPARGC1A bound in the initial step. PPARGC1A is involved in biological functions with implications for insulin action

including protection against oxidative stress, formation of muscle fiber types as well as regulation of microvascular flow. It is a chief regulator of energy metabolism and mitochondrial biogenesis by integrating and coordinating the activity of other transcription factors such as Nrf1, nuclear factor 2, PPARα, and mitochondrial transcription A. PPARGC1A is also central to antioxidant defense and redox balance, by regulating the expression of factors such as Nrf2 and MnSOD and promoting NADPH generation, and thereby counters increased ROS levels in highly oxidative cells and protects against inflammation. It is involved in the progression of hormone-associated cancers.

Target Details

This protein is a transcriptional coactivator that regulates the genes involved in energy metabolism. This protein interacts with PPARgamma, which permits the interaction of this protein with multiple transcription factors. This protein can interact with, and regulate the activities of, cAMP response element binding protein (CREB) and nuclear respiratory factors (NRFs). It provides a direct link between external physiological stimuli and the regulation of mitochondrial biogenesis, and is a major factor that regulates muscle fiber type determination. This protein may be also involved in controlling blood pressure, regulating cellular cholesterol homoeostasis, and the development of obesity.

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 PPARGC1 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 %	84
	Range %	80-92
1:2	Average %	97
	Range %	90-105
1:4	Average %	99
	Range %	92-110
1:8	Average %	95
	Range %	86-99

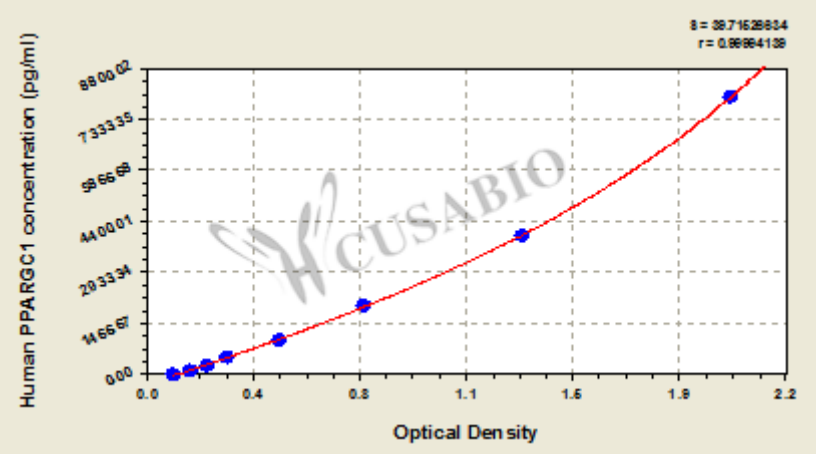
Recovery

The recovery of human PPARGC1 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	89-100
EDTA plasma (n=4)	96	90-100

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
8000	2.054	2.052	2.053	1.954
4000	1.315	1.325	1.320	1.221
2000	0.762	0.777	0.770	0.671
1000	0.470	0.477	0.474	0.375
500	0.284	0.295	0.290	0.191
250	0.216	0.224	0.220	0.121
125	0.157	0.165	0.161	0.062
0	0.096	0.102	0.099	?

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