



Human NAD-dependent deacetylase sirtuin-1 (SIRT1/SIR2L1) ELISA kit

Product Code	CSB-E15058h
Abbreviation	SIRT1
Protein Biological Process 1	Apoptosis/Autophagy
Target Name	sirtuin (silent mating type information regulation 2 homolog) 1 (S. cerevisiae)
Uniprot No.	Q96EB6
Alias	RP11-57G10.3, SIR2L1, SIR2alpha sir2-like 1 sirtuin 1 sirtuin type 1
Product Type	ELISA Kit
Immunogen Species	Homo sapiens (Human)
Protein Biological Process 3	Apoptosis
Sample Types	serum, plasma, cell culture supernates, tissue homogenates
Detection Range	0.156 ng/mL-10 ng/mL
Sensitivity	0.039 ng/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	Epigenetics and Nuclear Signaling
Gene Names	SIRT1
Tag Info	quantitative
Protein Description	Sandwich

Description

The human SIRT1 ELISA Kit is intended to measure human SIRT1 in serum, plasma, cell culture supernates,, or tissue homogenates. This assay uses the bi-antibody sandwich technique and enzyme-substrate chromogenic reaction to quantify human SIRT1 concentration. The intensity of the colored product is directly proportional to the concentration of SIRT1 present in the sample. This human SIRT1 ELISA kit has high specificity and excellent sensitivity.

SIRT1 is a conserved class III histone deacetylase that is mainly located in the nucleus and deacetylates histones to influence the state of the chromatin and subsequent gene transcription in rapid response to cellular conditions of energy demand. It is involved in a plethora of physiological activities, including



controlling DNA repair, tissue regeneration, cell survival, proliferation, inflammation, neuronal signaling, aging, and circadian rhythms. It also modulates especially energy metabolism and stress responses. In alcoholic liver diseases (ALDs), SIRT1 is beneficial for the regulation of hepatic lipid metabolism, inhibition of hepatic inflammation, controlling of hepatic fibrosis, and mediation of hepatocellular carcinoma.

Target Details

This gene encodes a member of the sirtuin family of proteins, homologs to the yeast Sir2 protein. Members of the sirtuin family are characterized by a sirtuin core domain and grouped into four classes. The functions of human sirtuins have not yet been determined; however, yeast sirtuin proteins are known to regulate epigenetic gene silencing and suppress recombination of rDNA. Studies suggest that the human sirtuins may function as intracellular regulatory proteins with mono-ADP-ribosyltransferase activity. This protein is included in class I of the sirtuin family. Alternative splicing results in multiple transcript variants.

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 SIRT1 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 %	92
	Range %	89-94
1:2	Average %	100
	Range %	97-102
1:4	Average %	93
	Range %	87-96
1:8	Average %	99
	Range %	94-102

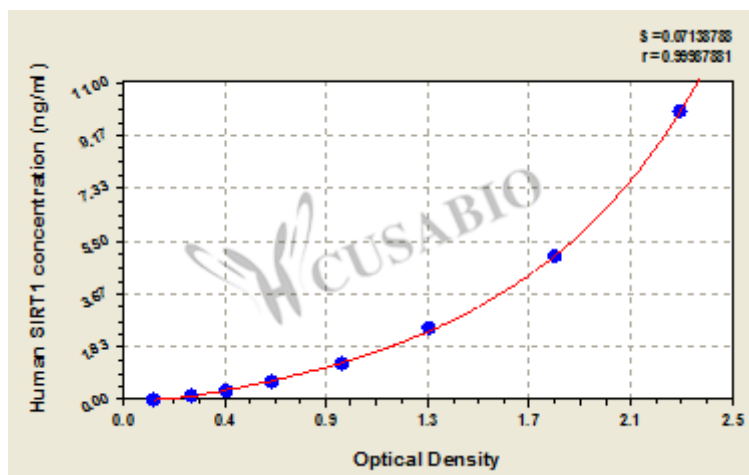
Recovery

The recovery of human SIRT1 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)	94	90-97
EDTA plasma (n=4)	96	93-98

Typical

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



ng/ml	OD1	OD2	Average	Corrected
10	2.322	2.335	2.329	2.187
5	1.776	1.850	1.813	1.671
2.5	1.278	1.298	1.288	1.146
1.25	0.929	0.918	0.924	0.782
0.625	0.640	0.623	0.632	0.490
0.312	0.449	0.440	0.445	0.303
0.156	0.303	0.288	0.296	0.154
0	0.144	0.140	0.142	?

Msds

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