



Rat Tryptophan Hydroxylase (TPH) ELISA Kit

Product Code	CSB-E13984r
Abbreviation	TPH1
Protein Biological Process 1	Neurobiology
Target Name	tryptophan hydroxylase 1
Uniprot No.	P09810
Alias	MGC119994, TPRH, TRPH, L-tryptophan hydroxylase[indoleacetic acid-5-hydroxylase]tryptophan hydroxylase (tryptophan 5-monooxygenase)
Product Type	ELISA Kit
Immunogen Species	Rattus norvegicus (Rat)
Protein Biological Process 3	Serotonin biosynthesis
Sample Types	serum, plasma, tissue homogenates, cell lysates
Detection Range	37.5 pg/mL-2400 pg/mL
Sensitivity	9.4 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	Neuroscience
Gene Names	Tph1
Tag Info	quantitative
Protein Description	Sandwich

Description

The Rat Tryptophan Hydroxylase (TPH) ELISA Kit is a powerful tool for quantitative analysis of the TPH protein in rat samples.

TPH is an important enzyme in the synthesis of serotonin, a neurotransmitter involved in various physiological and pathophysiological processes. This ELISA kit is specifically designed for the measurement of TPH protein levels in a variety of sample types, including serum, plasma, tissue homogenates, and cell lysates from *Rattus norvegicus* (Rat) species.

With a detection range of 37.5 pg/mL to 2400 pg/mL and a sensitivity of 9.4 pg/mL, this TPH ELISA kit can accurately detect even low levels of TPH protein. The assay principle is based on a sandwich immunoassay, which involves the



use of two specific antibodies that bind to different epitopes of the target protein. This approach ensures high specificity and sensitivity in the measurement of TPH levels. The assay can be completed in just 1-5 hours, with a sample volume of 50-100ul, making it a fast and convenient option for research.

This ELISA kit provides a reliable and accurate method for the quantitative analysis of TPH protein levels in rat samples, making it an essential tool for any researcher studying the role of serotonin in various physiological and pathophysiological processes.

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 TPH 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 %	97
	Range %	94-100
1:2	Average %	88
	Range %	83-96
1:4	Average %	92
	Range %	87-97
1:8	Average %	111
	Range %	106-115

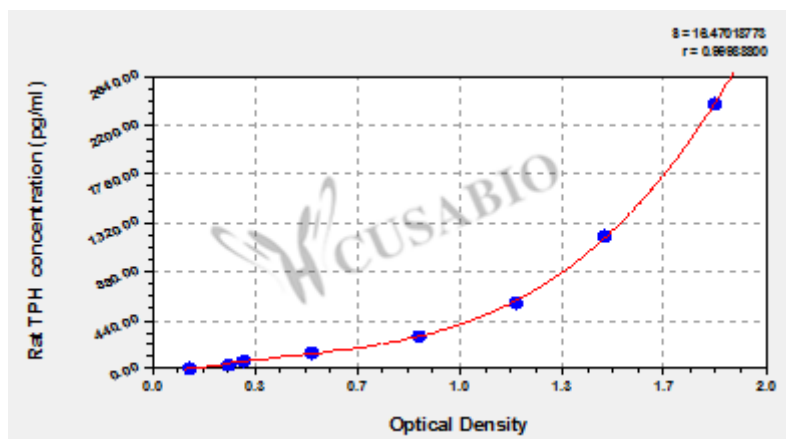
Recovery

The recovery of rat TPH 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)	89	82-96
EDTA plasma (n=4)	105	103-108

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
2400	1.821	1.831	1.826	1.692
1200	1.488	1.452	1.470	1.336
600	1.151	1.218	1.185	1.051
300	0.854	0.897	0.876	0.742
150	0.511	0.540	0.526	0.392
75	0.310	0.311	0.311	0.177
37.5	0.266	0.254	0.260	0.126
0	0.138	0.129	0.134	?

Msds

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