Rat extracellular superoxide dismutase [Cu-Zn](Cu/Zn-SOD/SOD3)ELISA kit

Product Code	CSB-E14981r
Abbreviation	SOD3
Target Name	superoxide dismutase 3, extracellular
Uniprot No.	Q08420
Alias	EC-SOD, MGC20077
Product Type	ELISA Kit
Immunogen Species	Rattus norvegicus (Rat)
Sample Types	serum, plasma, cell culture supernates, tissue homogenates
Detection Range	15.6 pg/mL-1000 pg/mL
Sensitivity	3.9 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	Sod3
Tag Info	quantitative
Protein Description	Sandwich

Description

The Rat extracellular superoxide dismutase [Cu-Zn] (Cu/Zn-SOD/SOD3) ELISA kit is the ideal tool for researchers studying oxidative stress and metabolism in Rattus norvegicus. It is designed to detect Extracellular superoxide dismutase [Cu-Zn], encoded by the Sod3 gene, in a variety of sample types, including serum, plasma, cell culture supernates, and tissue homogenates. With a detection range of 15.6 pg/mL-1000 pg/mL and a sensitivity of 3.9 pg/mL, you can be confident in the accuracy of your results.

The assay principle is quantitative and employs a sandwich measurement technique. The assay time is 1-5h, and the sample volume required is 50-100ul. The detection wavelength is 450 nm, providing reliable and precise readings.

This Rat extracellular superoxide dismutase [Cu-Zn] (Cu/Zn-SOD/SOD3) ELISA kit has been cited in over 10 research publications and is an excellent choice for researchers studying oxidative stress and metabolism.

Target Details

This gene encodes a member of the superoxide dismutase (SOD) protein family. SODs are antioxidant enzymes that catalyze the dismutation of two superoxide radicals into hydrogen peroxide and oxygen. The product of this gene is thought to protect the brain, lungs, and other tissues from oxidative stress. The protein is secreted into the extracellular space and forms a glycosylated homotetramer that is anchored to the extracellular matrix (ECM) and cell surfaces through an interaction with heparan sulfate proteoglycan and collagen. A fraction of the protein is cleaved near the C-terminus before secretion to generate circulating tetramers that do not interact with the ECM.

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 Cu/Zn-SOD/SOD3 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 %	93
	Range %	89-95
1:400	Average %	104
	Range %	100-107
1:800	Average %	95
	Range %	90-97
1:1600	Average %	98
	Range %	91-101

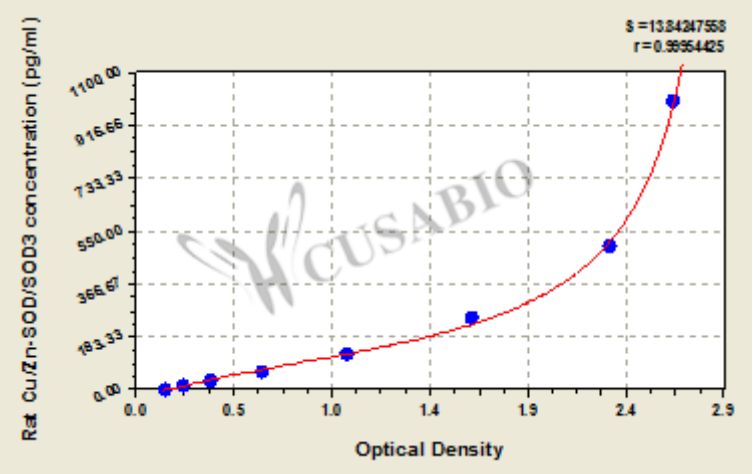
Recovery

The recovery of rat Cu/Zn-SOD/SOD3 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	89-97
EDTA plasma (n=4)	95	92-99

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
1000	2.644	2.588	2.616	2.461
500	2.264	2.344	2.304	2.149
250	1.650	1.632	1.641	1.486
125	1.044	1.028	1.036	0.881
62.5	0.624	0.636	0.630	0.475
31.2	0.383	0.368	0.376	0.221
15.6	0.248	0.239	0.244	0.089
0	0.156	0.154	0.155	?

Msds

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