

Rat 4-Hydroxynonenal (HNE) ELISA Kit

Description

Alternative Names:	4-HNE, HNE, 4-hydroxy-2-nonenal, 4-Hydroxynonenal
Catalogue No.	3738ELK
Size	96T
Reactivity	Rat
Range	15.63-1000 pg/mL
Sensitivity	7.54 pg/mL
Assay Type	Competitive Inhibition
Sample Type	Serum, plasma, tissue homogenates
Assay Length	2h
Research Area	Signal transduction; Metabolic pathway; Infection immunity; Hormone metabolism
Test principle	This assay employs the competitive inhibition enzyme immunoassay technique. The microplate provided in this kit has been pre-coated with HNE protein. Standards or samples are added to appropriate microtiter plate wells then with a biotin-conjugated antibody specific to HNE conjugated to Horseradish Peroxidase (HRP) is added to each microplate well. After washing, TMB substrate solution is added. The enzyme-substrate reaction is terminated by adding sulphuric acid solution and the color change is measured spectrophotometrically at 450nm \pm 10nm. The concentration of HNE in the samples is then determined by comparing the OD of the samples to the standard curve.



	CONCENTRATION (NG/ML)	OD	
Standard Curve	1000.00	0.182	â€”
	500.00	0.275	â€”
	250.00	0.557	â€”
	125.00	0.897	â€”
	62.50	1.253	â€”
	31.25	1.587	â€”
	15.63	1.863	â€”
	0.00	2.475	â€”

Intra-assay Precision (Precision within an assay) \leq CV% < 8%

Three samples of known concentration were tested twenty times on one precision.

Precision

Inter-assay Precision (Precision between assays) \leq CV% < 10%

Three samples of known concentration were tested in forty separate assay precision.

Matrices listed below were spiked with certain level of recombinant 4-HN were calculated by comparing the measured value to the expected amount.

Recovery	MATRIX	RECOVERY RANGE
	serum(n=5)	82-95%
EDTA plasma(n=5)	95-107%	
Heparin plasma(n=5)	87-99%	

The linearity of the kit was assayed by testing samples spiked with appropriate concentrations and their serial dilutions. The results were demonstrated by the percentage of the measured value to the expected.

Linearity	MATRIX	1:2	1:4
	serum(n=5)		82-93%
EDTA plasma(n=5)		86-98%	91-103%
Heparin plasma(n=5)		83-94%	83-96%

Note

For Research Use Only

Date Created

2024/07/03