



Rat tissue inhibitors of metalloproteinase 1,TIMP-1 ELISA Kit

Product Code	CSB-E08005r
Abbreviation	TIMP1
Protein Biological Process 1	Cardiovascular
Target Name	TIMP metalloproteinase inhibitor 1
Uniprot No.	P30120
Alias	RP1-230G1.3, CLGI, EPA, EPO, FLJ90373, HCI, TIMP, erythroid potentiating activity fibroblast collagenase inhibitor tissue inhibitor of metalloproteinase 1
Product Type	ELISA Kit
Immunogen Species	Rattus norvegicus (Rat)
Protein Biological Process 3	Erythrocyte maturation
Sample Types	serum, plasma, cell culture supernates, tissue homogenates
Detection Range	0.156 ng/mL-10 ng/mL
Sensitivity	0.224 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	Cardiovascular
Gene Names	Timp1
Tag Info	quantitative
Protein Description	Sandwich

Description

This Rat Tissue Inhibitors of Metalloproteinase 1 (TIMP-1) ELISA Kit is an accurate and reliable solution for measuring TIMP-1 levels in serum, plasma, cell culture supernates, and tissue homogenates of Rattus norvegicus (Rat).

This ELISA kit has been specifically designed to detect and quantify TIMP-1 levels, an important protein involved in regulating matrix metalloproteinase activity, which is a key process in cardiovascular research. Also functions as a growth factor that regulates cell differentiation, migration and cell death and activates cellular signaling cascades.



With a detection range of 0.156 ng/mL to 10 ng/mL and a sensitivity of 0.224 ng/mL, this quantitative assay can provide precise and reproducible results in just 1 to 5 hours. The sample volume required is only 50-100ul, making it an economical and efficient option for researchers.

The assay principle is based on a sandwich ELISA method, which utilizes specific antibodies to capture and detect TIMP-1 in the sample. The detection wavelength is 450 nm, ensuring accurate and reliable measurements.

Target Details

This gene belongs to the TIMP gene family. The proteins encoded by this gene family are natural inhibitors of the matrix metalloproteinases (MMPs), a group of peptidases involved in degradation of the extracellular matrix. In addition to its inhibitory role against most of the known MMPs, the encoded protein is able to promote cell proliferation in a wide range of cell types, and may also have an anti-apoptotic function. Transcription of this gene is highly inducible in response to many cytokines and hormones. In addition, the expression from some but not all inactive X chromosomes suggests that this gene inactivation is polymorphic in human females. This gene is located within intron 6 of the synapsin I gene and is transcribed in the opposite direction.

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.

Sample	Intra-Assay Precision			Inter-Assay Precision		
	1	2	3	1	2	3
n	20	20	20	20	20	20
Mean (ng/ml)	1.232	1.162	1.155	1.257	1.211	1.323
SD	0.026	0.023	0.024	0.032	0.029	0.033
CV(%)	8.869	7.733	7.896	9.969	9.295	9.880

Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of Rat TIMP-1 in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

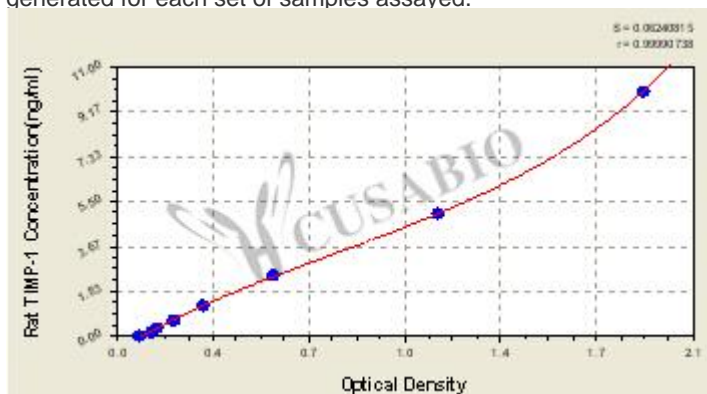


	Sample	Serum(n=4)
1:1	Average %	91
	Range %	80-101
1:2	Average %	86
	Range %	82-104
1:4	Average %	97
	Range %	89-117
1:8	Average %	94
	Range %	88-102

	Sample	Cell Culture Supernates (n=4)
1:1	Average %	93
	Range %	80-105
1:2	Average %	83
	Range %	82-105
1:4	Average %	97
	Range %	89-118
1:8	Average %	94
	Range %	88-106

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
0	0.095	0.088	0.092	
0.15625	0.137	0.135	0.136	0.045
0.3125	0.158	0.147	0.153	0.061
0.625	0.211	0.214	0.213	0.121
1.25	0.308	0.332	0.320	0.229
2.5	0.548	0.601	0.575	0.483
5	1.110	1.225	1.168	1.076
10	1.896	1.912	1.904	1.813

Msds

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