Human Tissue Inhibitor Of Matrix Metalloprotease-1 (TIMP-1) ELISA KIT

Product Code	CSB-E08003h
Abbreviation	TIMP1
Protein Biological Process 1	Cardiovascular
Target Name	TIMP metallopeptidase inhibitor 1
Uniprot No.	P01033
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	Homo sapiens (Human)
Protein Biological Process 3	Erythrocyte maturation
Sample Types	serum, plasma, tissue homogenates
Detection Range	0.39 ng/mL-25 ng/mL
Sensitivity	0.434 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

The human tissue inhibitor of matrix metalloprotease-1 (TIMP1) ELISA kit is suitable for the quantitative determination of human TIMP1 in serum, plasma, or tissue homogenates. This assay employs the bi-antibody sandwich technique and enzyme-substrate chromogenic reaction to quantify human TIMP1 levels in the sample. The amount of synthesized colored product is positively related to the analyte of interest in the sample.

TIMP1 is a glycoprotein produced by cardiac myocytes and fibroblasts in the normal heart. TIMP1 binds with active MMPs to inhibit MMP activity. In addition to suppressing MMP activity, TIMP1 also regulates multiple biological activities,

including inhibiting apoptosis, stimulating cell proliferation and differentiation, as well as promoting migration and angiogenesis or the metastatic potential of tumor cells. Overexpression of TIMP1 has been found in several types of human cancers, including prostate cancer, lung cancer, melanoma, glioblastoma, and breast cancer. TIMP1 acting as a specific hallmark of human cancer is also associated with the tumor microenvironment (TME) and drug resistance.

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.

	Intra-Assay Precision			Inter-Assay Precision		
Sample	1	2	3	1	2	3
n	20	20	20	20	20	20
Mean(ng/ml)	3.288	3.275	3.280	3.392	3.076	2.704
SD	0.016	0.017	0.015	0.027	0.027	0.020
CV(%)	4.508	5.101	4.488	7.373	7.990	5.377

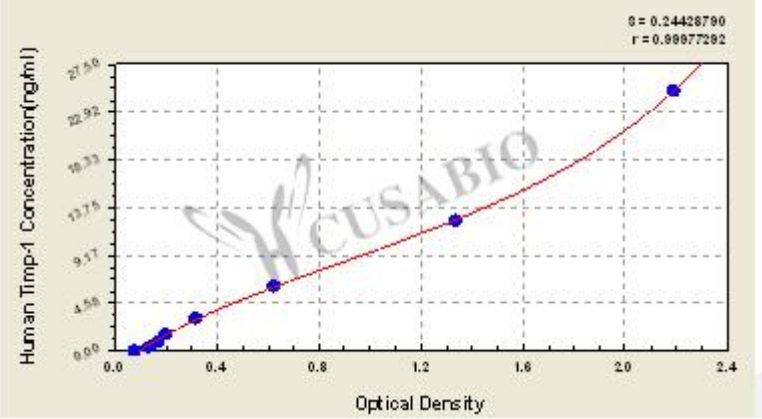
Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of human 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)
1:20	Average %	92
	Range %	80-101
1:40	Average %	86
	Range %	82-104
1:80	Average %	97
	Range %	89-101
1:160	Average %	94
	Range %	88-102

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	0.081	0.090	0.086	
0.390	0.142	0.142	0.142	0.056
0.781	0.177	0.174	0.176	0.090
1.563	0.216	0.204	0.210	0.124
3.125	0.321	0.334	0.328	0.242
6.25	0.626	0.650	0.638	0.552
12.5	1.392	1.314	1.353	1.267
25	2.180	2.258	2.219	2.133

Msds

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