



Human tartrate-resistant acid phosphatase 5b, TRACP-5b ELISA Kit

Product Code	CSB-E08490h
Abbreviation	ACP5
Target Name	acid phosphatase 5, tartrate resistant
Uniprot No.	P13686
Alias	MGC117378, TRAP, TrATPase tartrate resistant acid phosphatase 5 tartrate-resistant acid ATPase
Product Type	ELISA Kit
Immunogen Species	Homo sapiens (Human)
Sample Types	serum, plasma, tissue homogenates
Detection Range	0.312 mIU/mL-20 mIU/mL
Sensitivity	0.078 mIU/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	Signal Transduction
Gene Names	ACP5
Tag Info	quantitative
Protein Description	Sandwich

Description

The human TRACP5b ELISA kit (CSB-E08490h) is designed for the quantitative measurement of human TRACP5b protein in serum, plasma, or tissue homogenates. It quantitates human TRACP5b with 0.078 mIU/ml sensitivity and shows excellent specificity for human TRACP5b. It uses the bi-antibody sandwich enzyme immunoassay technique. This assay employs a biotin-conjugated TRACP5b antibody that recognizes the analyte bound by the immobilized TRACP5b antibody, forming an antibody-analyte-antibody complex. The immune complex is further detected by avidin-conjugated HRP. The TMB solution is added into the wells and turns blue and finally turns yellow after the addition of the stop solution. Solution color develops in proportion to the amount of TRACP5b in the sample. The O.D. value is measured using a microplate reader at 450 nm and is used to determine the concentration of the human TRACP5b in the sample.

TRACP5b (ACP5), secreted by osteoclasts, is increased in osteoporosis



individuals and is used as a specific and sensitive marker of bone resorption and bone remodeling. After release into circulation, TRACP5b becomes inactive and is degraded into fragments that are removed by the liver. TRACP5b has been applied to diagnose bone diseases such as osteoporosis and bone metastasis and for monitoring antiresorptive treatment. Alatalo et al and Rissanen et al have shown that TRACP5b is a good indicator of osteoclast number in mouse bone marrow-derived osteoclasts and human blood monocyte-derived osteoclasts.

Target Details

This gene encodes an iron containing glycoprotein which catalyzes the conversion of orthophosphoric monoester to alcohol and orthophosphate. It is the most basic of the acid phosphatases and is the only form not inhibited by L(+)-tartrate.

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 human TRACP-5b 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 %	88
	Range %	83-92
1:2	Average %	99
	Range %	94-102
1:4	Average %	105
	Range %	100-108
1:8	Average %	95
	Range %	90-98

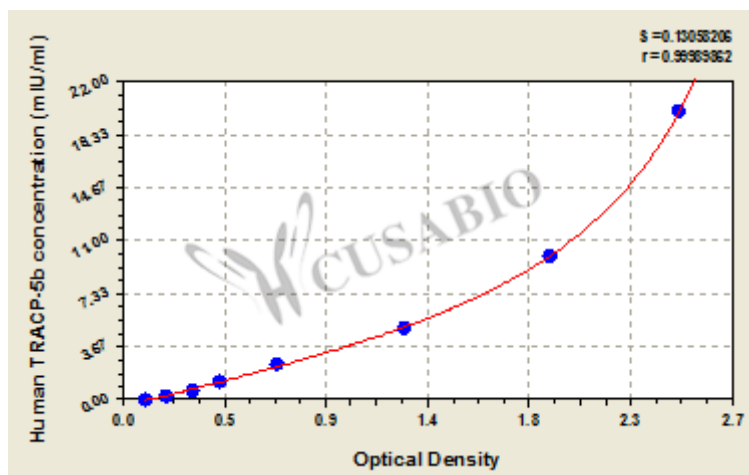
Recovery

The recovery of human TRACP-5b 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)	95	92-97
EDTA plasma (n=4)	96	92-99

Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



mIU/ml	OD1	OD2	Average	Corrected
20	2.484	2.456	2.470	2.357
10	1.918	1.876	1.897	1.784
5	1.262	1.251	1.257	1.144
2.5	0.666	0.715	0.691	0.578
1.25	0.424	0.454	0.439	0.326
0.625	0.312	0.329	0.321	0.208
0.312	0.199	0.208	0.204	0.091
0	0.111	0.115	0.113	?

Msds

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