

Human CT-1 ELISA Kit ab216166

Recombinant SimpleStep ELISA[®]

9 Images

Overview

Product name	Human CT-1 ELISA Kit			
Detection method	Colorimetric			
Precision	Intra-assay			
	Sample	n	Mean	SD
	Overall	3		CV%
				3.2%
	Inter-assay			
	Sample	n	Mean	SD
	Overall	5		CV%
				7.2%
Sample type	Cell culture supernatant, Serum, Cell culture extracts, Tissue Extracts, Hep Plasma, EDTA Plasma, Cit plasma			
Assay type	Sandwich (quantitative)			
Sensitivity	3.2 pg/ml			
Range	23.44 pg/ml - 1500 pg/ml			
Recovery	Sample specific recovery			

Sample type	Average %	Range
Serum	115	104% - 122%
Cell culture extracts	114	106% - 128%
Tissue Extracts	109	102% - 121%
Cell culture media	107	106% - 108%
Hep Plasma	107	105% - 109%
EDTA Plasma	109	106% - 116%

Sample type	Average %	Range
Cit plasma	92	90% - 95%

Assay time

1h 30m

Assay duration

One step assay

Species reactivity

Reacts with: Human

Product overview

Human CT-1 ELISA Kit (ab216166) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of CT-1 protein in cell culture extracts, cell culture supernatant, cit plasma, edta plasma, hep plasma, serum, and tissue extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human CT-1 with 3.2 pg/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate ([ab203359](#)) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

Notes

CT-1 (Cardiotrophin 1) is a secreted member of the IL-6 cytokine superfamily. It is a 201 amino acid protein which binds to and activates the ILST/gp130 heterodimer receptor. CT-1 induces cardiomyocyte hypertrophy *in vitro* and is a biomarker implicated in hypertension. It is highly expressed in heart, skeletal muscle, prostate and ovary. It has lower expression levels in lung, kidney, pancreas, thymus, testis and small intestine. There is little or no expression of CT-1 in brain, placenta, liver, spleen, colon or peripheral blood leukocytes.

Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.

It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

Platform

Pre-coated microplate (12 x 8 well strips)

Properties

Storage instructions

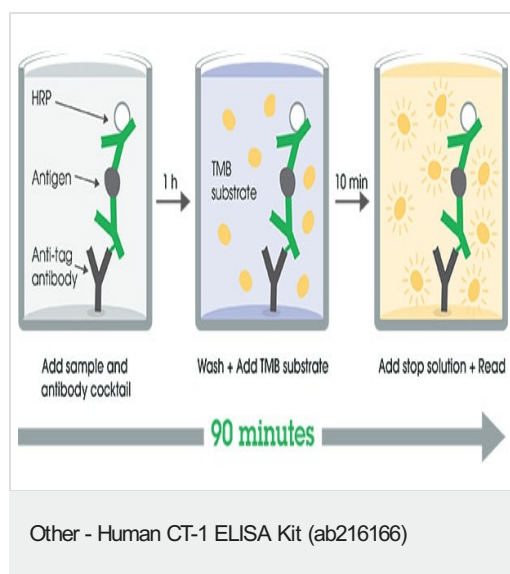
Store at +4°C. Please refer to protocols.

Components	1 x 96 tests	1 x 96 tests
10X Human CT-1 Detector Antibody	1 x 600µl	1 x 600µl

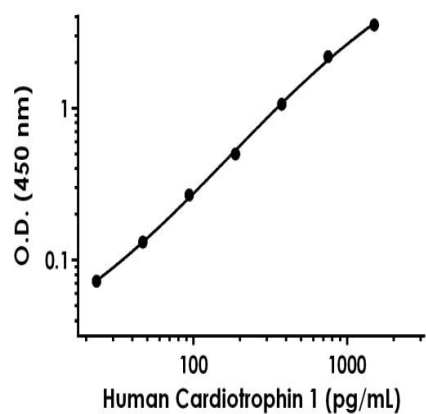
Components	1 x 96 tests	1 x 96 tests
10X Human CT-1 Capture Antibody	1 x 600µl	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml	1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml	1 x 1ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml	1 x 10ml
Antibody Diluent CPI2	1 x 6ml	1 x 6ml
Human CT-1 Lyophilized Recombinant Protein	2 vials	2 vials
Plate Seals	1 unit	1 unit
Sample Diluent 25BS	1 x 20ml	1 x 20ml
Sample Diluent NS (ab193972)	1 x 12ml	1 x 12ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit	1 unit
Stop Solution	1 x 12ml	1 x 12ml
TMB Development Solution	1 x 12ml	1 x 12ml

Function	Induces cardiac myocyte hypertrophy in vitro. Binds to and activates the ILST/gp130 receptor.
Tissue specificity	Highly expressed in heart, skeletal muscle, prostate and ovary. Lower levels in lung, kidney, pancreas, thymus, testis and small intestine. Little or no expression in brain, placenta, liver, spleen, colon or peripheral blood leukocytes.
Sequence similarities	Belongs to the IL-6 superfamily.
Cellular localization	Secreted.

Images

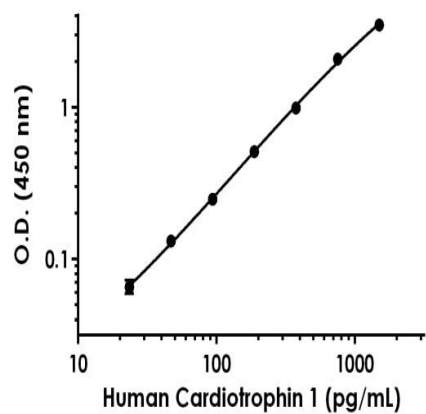


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



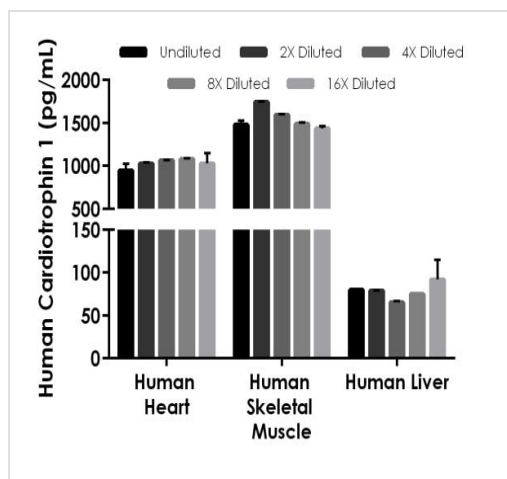
Background-subtracted data values (mean \pm SD) are graphed.

Example of human Cardiotrophin 1 standard curve in 1X Cell Extraction Buffer PTR.



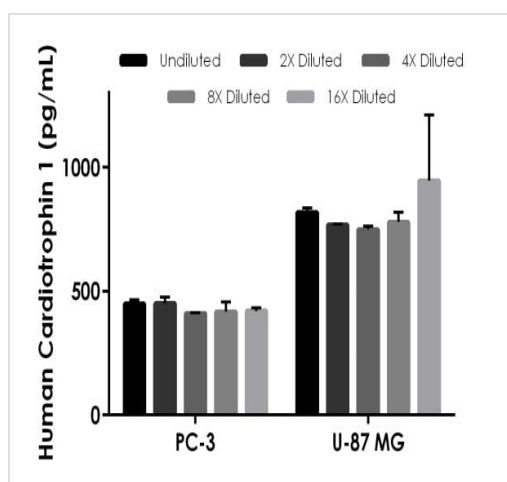
Background-subtracted data values (mean \pm SD) are graphed.

Example of human Cardiotrophin 1 standard curve in Sample Diluent 25BS.



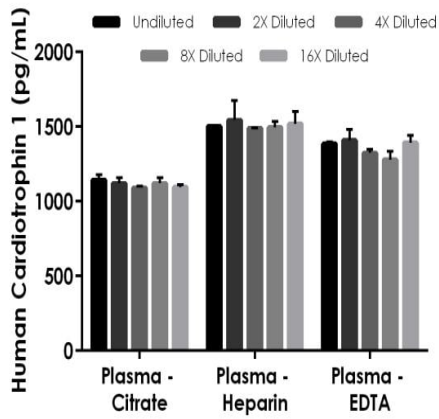
Interpolated concentrations of native Cardiotrophin 1 in human heart, skeletal muscle, and liver based on a 1,000 µg/mL extract load.

The concentrations of Cardiotrophin 1 were measured in duplicate and interpolated from the Cardiotrophin 1 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean \pm SD, n=2). The mean Cardiotrophin 1 concentration was determined to be 1,029 pg/mL in heart, 1,550 pg/mL in skeletal muscle, and 78 pg/mL in liver.



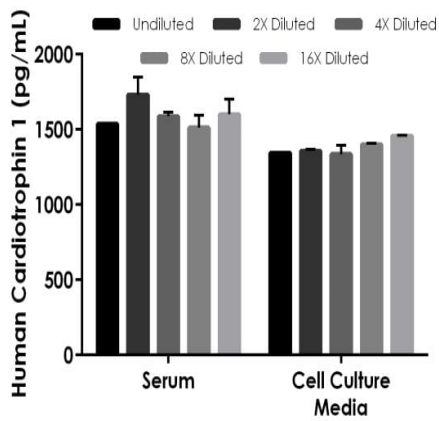
Interpolated concentrations of native Cardiotrophin 1 in PC-3 and U-87 MG cell extracts based on a 1,000 µg/mL extract load.

The concentrations of Cardiotrophin 1 were measured in duplicate and interpolated from the Cardiotrophin 1 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean \pm SD, n=2). The mean Cardiotrophin 1 concentration was determined to be 429 pg/mL in PC-3, and 811 pg/mL in U-87 MG.



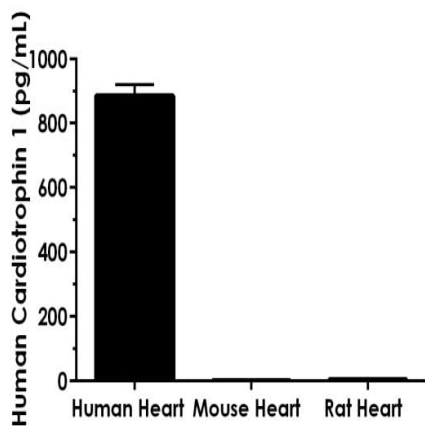
Interpolated concentrations of spike Cardiotrophin 1 in human plasma samples.

The concentrations of Cardiotrophin 1 were measured in duplicates, interpolated from the Cardiotrophin 1 standard curves and corrected for sample dilution. Undiluted samples are as follows: plasma (citrate) 100%, plasma (heparin) 100%, and plasma (EDTA) 100%. The interpolated dilution factor corrected values are plotted (mean \pm SD, n=2).



Interpolated concentrations of spike Cardiotrophin 1 in human serum and cell culture media (RPMI + 10% FBS) samples. concentrations of spike Cardiotrophin 1 in human plasma samples.

The concentrations of Cardiotrophin 1 were measured in duplicates, interpolated from the Cardiotrophin 1 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 100% and cell culture media 100%. The interpolated dilution factor corrected values are plotted (mean \pm SD, n=2).



The protein concentrations were interpolated from the human Cardiotrophin standard curve.

Other species reactivity was determined by measuring a 1,000 µg/mL extract load of various species heart tissue extract.

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recombinant antibodies



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

To learn more about the advantages of recombinant antibodies see [here](#).

Sandwich ELISA - Human CT-1 ELISA Kit
(ab216166)

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