

Product datasheet

Human MCP1 ELISA Kit ab179886

SimpleStep ELISA[®]

[1 References](#) [3 Images](#)

Overview

Product name Human MCP1 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Overall	5			2.5%

Inter-assay

Sample	n	Mean	SD	CV%
Overall	3			6.7%

Sample type

Cell culture supernatant, Serum, Plasma, Heparin Plasma, EDTA Plasma, Citrate Plasma

Assay type

Sandwich (quantitative)

Sensitivity

1.26 pg/ml

Range

4.7 pg/ml - 300 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	98	97% - 99%
Urine	92	90% - 94%
Serum	97	94% - 101%
Heparin Plasma	91	91% - %
EDTA Plasma	94	90% - 97%
Citrate Plasma	92	91% - 95%

Assay time	1h 30m
Assay duration	One step assay
Species reactivity	Reacts with: Human Does not react with: Mouse, Cow

Product overview Human MCP1 SimpleStep ELISA® (ab179886) has been re-developed with new capture and detector antibodies. We have identified new recombinant monoclonal antibodies to use in the SimpleStep ELISA platform that provide a higher sensitivity when quantifying MCP1 in human serum, plasma, urine and cell culture supernatants.

MCP1 *in vitro* SimpleStep ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of MCP1 protein in human serum, plasma, urine, and cell culture supernatant samples.

The SimpleStep ELISA employs an affinity tag labeled capture antibody and a reporter conjugated detector antibody which immunocapture the sample analyte in solution. This entire complex (capture antibody/analyte/detector antibody) is in turn immobilized via immunoaffinity of an anti-tag antibody coating the well. To perform the assay, samples or standards are added to the wells, followed by the antibody mix. After incubation, the wells are washed to remove unbound material. TMB substrate is added and during incubation is catalyzed by HRP, generating blue coloration. This reaction is then stopped by addition of Stop Solution completing any color change from blue to yellow. Signal is generated proportionally to the amount of bound analyte and the intensity is measured at 450 nm. Optionally, instead of the endpoint reading, development of TMB can be recorded kinetically at 600 nm.

Notes MCP1 (CCL2) is a chemotactic factor that attracts monocytes and basophils but not neutrophils or eosinophils. Augments monocyte anti-tumor activity. Has been implicated in the pathogenesis of diseases characterized by monocytic infiltrates, like psoriasis, rheumatoid arthritis or atherosclerosis. May be involved in the recruitment of monocytes into the arterial wall during the disease process of atherosclerosis.

Tested applications **Suitable for:** Sandwich ELISA
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
10X Human MCP1 Capture Antibody	1 x 600µl
10X Human MCP1 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent CPI	1 x 6ml

Components	1 x 96 tests
Human MCP1 Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Substrate	1 x 12ml

Function	Chemotactic factor that attracts monocytes and basophils but not neutrophils or eosinophils. Augments monocyte anti-tumor activity. Has been implicated in the pathogenesis of diseases characterized by monocytic infiltrates, like psoriasis, rheumatoid arthritis or atherosclerosis. May be involved in the recruitment of monocytes into the arterial wall during the disease process of atherosclerosis.
Sequence similarities	Belongs to the intercrine beta (chemokine CC) family.
Post-translational modifications	Processing at the N-terminus can regulate receptor and target cell selectivity. Deletion of the N-terminal residue converts it from an activator of basophil to an eosinophil chemoattractant.
Cellular localization	Secreted.

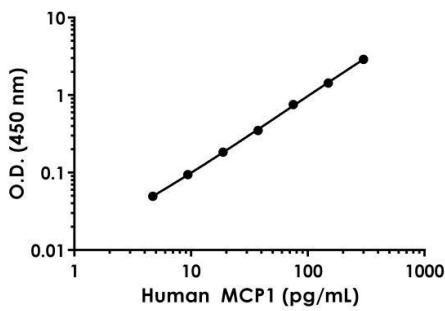
Applications

Our [Abpromise guarantee](#) covers the use of **ab179886** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

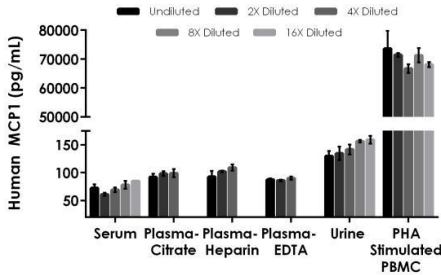
Application	Abreviews	Notes
Sandwich ELISA		Use at an assay dependent concentration.

Images



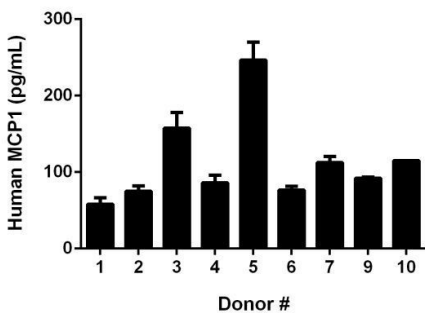
Example of human MCP1 standard curve in Sample Diluent NS.

The MCP1 standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



Interpolated concentrations of native MCP1 in human serum, plasma, urine, and cell culture supernatant samples.

The concentrations of MCP1 were measured in duplicates, interpolated from the MCP1 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 100%, plasma (citrate) 25%, plasma (heparin), 25%, plasma (EDTA), urine 100%, and PHA stimulated PBMC supernatant 0.25%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean MCP1 concentration was determined to be 72 pg/mL in serum, 96 pg/mL in plasma (citrate), 101 pg/mL in plasma (heparin), 88 pg/mL plasma (EDTA), 144 pg/mL in urine, and 70217 pg/mL in PHA stimulated PBMC supernatant.



Serum from nine individual healthy human male donors was measured in duplicate.

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean MCP1 concentration was determined to be 113 pg/mL with a range of 58 - 247 pg/mL.

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