

Human MCP-1 ELISA Kit ab179886

重组 SimpleStep ELISA

27 References 10 图像

概述

| | | | | |
|------|--|-----|------------|-----|
| 产品名称 | 人MCP-1 ELISA试剂盒 | | | |
| 检测方法 | Colorimetric | | | |
| 精确度 | 批次内 | | | |
| | 样品 | n | Mean | SD |
| | Overall | 5 | | CV% |
| | 批次间 | | | |
| | 样品 | n | Mean | SD |
| | Overall | 3 | | CV% |
| 样品类型 | Cell culture supernatant, Urine, Serum, Plasma, Hep Plasma, EDTA Plasma, Cit plasma, Cerebral Spinal Fluid | | | |
| 检测类型 | Sandwich (quantitative) | | | |
| 灵敏度 | 1.26 pg/ml | | | |
| 范围 | 4.7 pg/ml - 300 pg/ml | | | |
| 回收率 | 特定样本回收率 | | | |
| | 样品类型 | 平均% | 范围 | |
| | Cell culture supernatant | 98 | 97% - 99% | |
| | Urine | 92 | 90% - 94% | |
| | Serum | 97 | 94% - 101% | |
| | Hep Plasma | 91 | 91% - % | |
| | EDTA Plasma | 94 | 90% - 97% | |
| | Cit plasma | 92 | 91% - 95% | |

| 样品类型 | 平均% | 范围 |
|-----------------------|-----|-------------|
| Cerebral Spinal Fluid | 105 | 102% - 110% |

检测时间

1h 30m

实验步骤

One step assay

种属反应性

与反应: Human

不与反应: Cow

产品概述

Human MCP1 (CCL2) ELISA kit (ab179886) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of MCP1 protein in human serum, plasma, urine, and cell culture supernatant samples. It uses our proprietary SimpleStep ELISA® technology. Quantitate human MCP1 with 1.26 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.

ASSAY SPECIFICITY This kit recognizes both native and recombinant human MCP1 protein in serum, plasma, urine, and cell culture supernatant samples only. Cell and tissue extract samples have not been tested with this kit.

SPECIES REACTIVITY This kit recognizes human MCP1 protein.

Other species reactivity was determined by measuring MCP1 (100%) serum samples of various species, interpolating the protein concentrations from the human standard curve, and expressing the interpolated concentrations as a percentage of the protein concentration in human serum assayed at the same dilution.

Reactivity < 3% was determined for the following species: Mouse and cow.

CROSS REACTIVITY Recombinant mouse MCP1 and rat MCP1 were prepared at 100 pg/mL and 50 pg/mL and assayed for cross reactivity. Cross-reactivity was only observed at 50 ng/mL.

CALIBRATION

This immunoassay is calibrated against a highly purified human MCP1. The NIBSC/WHO unclassified purified human MCP1 preparation 92/794 was evaluated in this kit.

The dose response curve of the unclassified standard MCP1 parallels the SimpleStep standard

curve. To convert sample values obtained with the SimpleStep human MCP1 kit to approximate NIBSC 92/794 units, use the equation below.

NIBSC (92/794) approximate value (U/mL) = 0.000266 x SimpleStep human MCP1 value (pg/mL).

说明 MCP-1 (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.

平台 Pre-coated microplate (12 x 8 well strips)

性能

存放说明 Store at +4°C. Please refer to protocols.

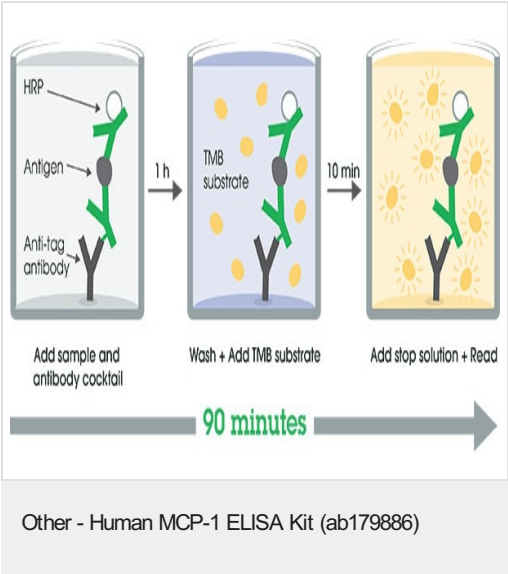
| 组件 | 1 x 384 tests | 1 x 96 tests | 1 x 96 tests |
|--|---------------|--------------|--------------|
| 10X Human MCP-1 Capture Antibody | 1 x 600µl | 1 x 600µl | 1 x 600µl |
| 10X Human MCP-1 Detector Antibody | 1 x 600µl | 1 x 600µl | 1 x 600µl |
| 10X Wash Buffer PT (ab206977) | 1 x 20ml | 1 x 20ml | 1 x 20ml |
| 384 well CaptSure™ microplates | 1 unit | 0 x 0 unit | 0 x 0 unit |
| Antibody Diluent CPI2 | 1 x 6ml | 1 x 6ml | 0 x 0ml |
| Human MCP-1 Lyophilized Recombinant Protein (ab9670) | 2 vials | 2 vials | 2 vials |
| Plate Seals | 1 unit | 1 unit | 1 unit |
| Sample Diluent NS (ab193972) | 2 x 50ml | 1 x 50ml | 1 x 50ml |
| SimpleStep Pre-Coated 96-Well Microplate (ab206978) | 0 x 0 unit | 1 unit | 1 unit |
| Stop Solution | 2 x 12ml | 1 x 12ml | 1 x 12ml |
| TMB Development Solution | 2 x 12ml | 1 x 12ml | 1 x 12ml |

功能 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.

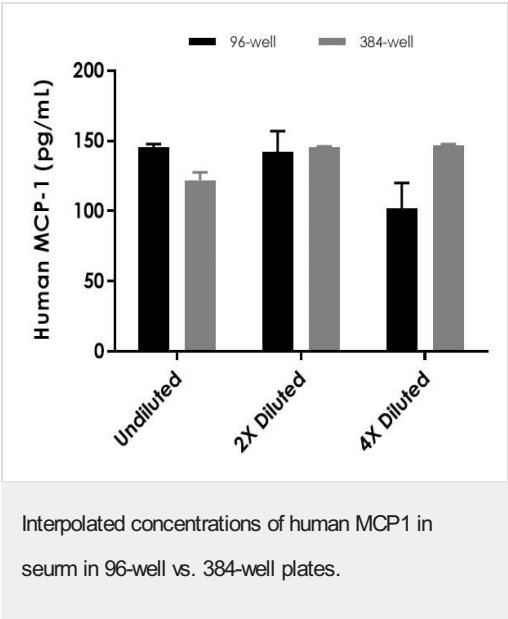
序列相似性 Belongs to the intercrine beta (chemokine CC) family.

翻译后修饰 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.

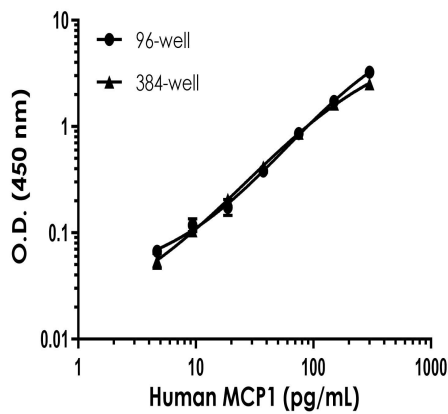
图片



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.

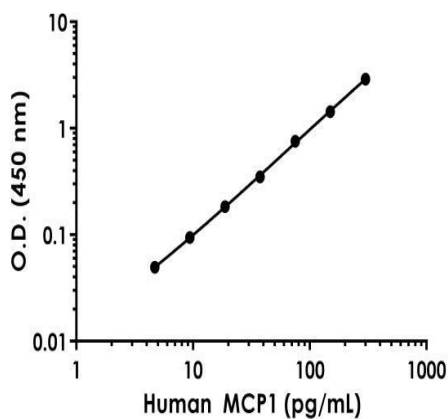


Interpolated concentration of native MCP1 was measured in duplicate at different sample concentrations in 96-well vs. 384-well plates. Undiluted samples are 100% serum. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). Sample dilutions are made in Sample Diluent NS.



Example of human MCP1 standard curve in Sample Diluent NS in 96-well vs. 384-well plate.

Example of human MCP1 standard curve in 96-well vs. 384-well plate. Background-subtracted data values (mean \pm SD) are graphed.



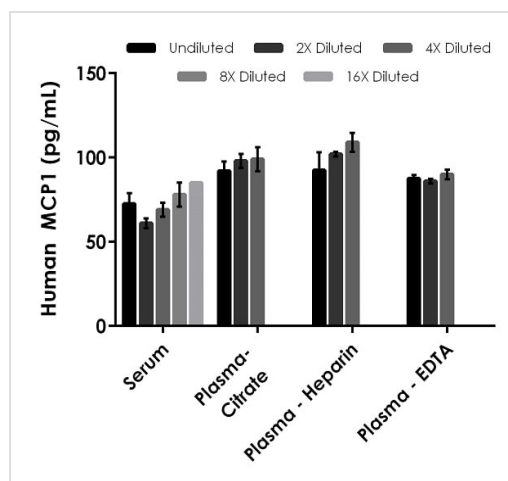
Example of human MCP1 standard curve in Sample Diluent NS.

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

| Standard Curve Measurements | | | |
|-----------------------------|------------|-------|----------|
| Concentration (pg/mL) | O.D 450 nm | | Mean O.D |
| | 1 | 2 | |
| 0 | 0.093 | 0.094 | 0.094 |
| 4.7 | 0.139 | 0.147 | 0.143 |
| 9.4 | 0.188 | 0.187 | 0.187 |
| 18.8 | 0.279 | 0.275 | 0.277 |
| 37.5 | 0.444 | 0.442 | 0.443 |
| 75 | 0.837 | 0.864 | 0.850 |
| 150 | 1.529 | 1.522 | 1.525 |
| 300 | 2.985 | 2.998 | 2.992 |

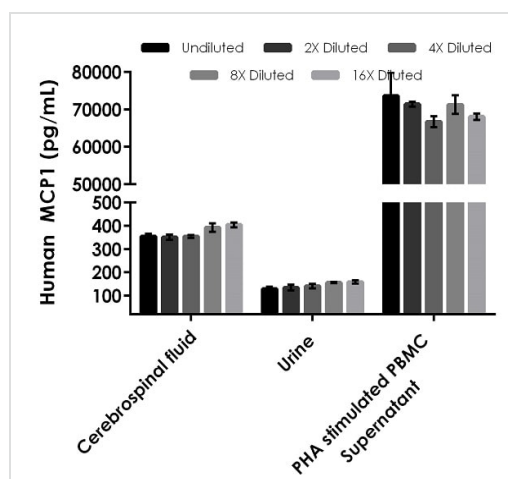
Standard curve

Example of human MCP1 standard curve in Sample Diluent NS. The MCP1 standard curve was prepared as described. Raw data values are shown in the table. Background-subtracted data values (mean \pm SD) are graphed.



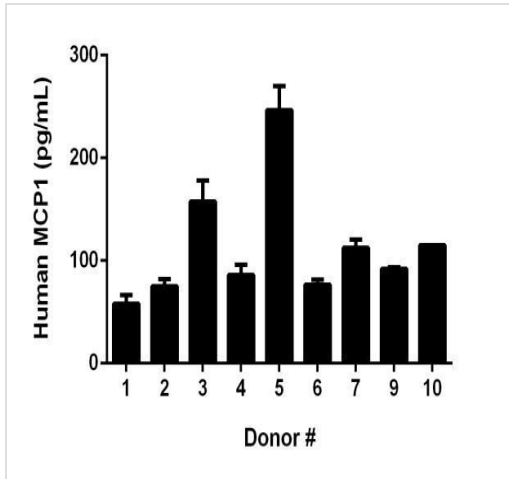
Interpolated concentrations of native MCP1 in human serum and plasma samples.

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%, and plasma (EDTA). The interpolated dilution factor corrected values are plotted (mean \pm 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), and 88 pg/mL plasma (EDTA).



Interpolated concentrations of native MCP1 in human cerebrospinal fluid, 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: cerebrospinal fluid (50%), urine 100%, and PHA stimulated PBMC supernatant 0.25%. The interpolated dilution factor corrected values are plotted (mean \pm SD, $n=2$). The mean MCP1 concentration was determined to be 371 pg/mL in cerebrospinal fluid, 144 pg/mL in urine, and 70217 pg/mL in PHA stimulated PBMC supernatant.



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

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

| Dilution Factor | Interpolated value | 100% Human Serum | 25% Human Plasma (Citrate) | 25% Human Plasma (EDTA) | 25% Human Plasma (Heparin) | 0.25% PHA Stim. PBMC Sup | 100% Human Urine |
|-----------------|--------------------|------------------|----------------------------|-------------------------|----------------------------|--------------------------|------------------|
| Undiluted | pg/mL | 72.4 | 22.9 | 21.9 | 23.1 | 183.9 | 129.8 |
| | % Expected value | 100 | 100 | 100 | 100 | 100 | 100 |
| 2 | pg/mL | 30.4 | 12.3 | 10.8 | 12.8 | 89.3 | 67.1 |
| | % Expected value | 84 | 107 | 99 | 110 | 97 | 103 |
| 4 | pg/mL | 17.3 | 6.2 | 5.6 | 6.8 | 41.7 | 35.4 |
| | % Expected value | 96 | 108 | 103 | 118 | 91 | 109 |
| 8 | pg/mL | 9.7 | ND | ND | ND | 22.3 | 19.5 |
| | % Expected value | 108 | - | - | - | 97 | 120 |
| 16 | pg/mL | 5.3 | ND | ND | ND | 10.6 | 10.0 |
| | % Expected value | 118 | - | - | - | 93 | 123 |

ND - Non-Detectable

Linearity of dilution is determined based on interpolated values from the standard curve. Linearity of dilution defines a sample concentration interval in which interpolated target concentrations are directly proportional to sample dilution.

Native MCP1 was measured in the following biological samples in a 2-fold dilution series. Sample dilutions are made in Sample Diluent NS.

Linearity of dilution.

Powered by
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

Sandwich ELISA - Human MCP-1 ELISA Kit
(ab179886)

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

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