abcam

Product datasheet

Human CCL18 ELISA Kit ab211649

Recombinant SimpleStep ELISA®

8 Images

Overview

Product name Human CCL18 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Serum	8			3%

Inter-assay

Sample	n	Mean	SD	CV%
Serum	3			7.7%

Sample type Cell culture supernatant, Urine, Serum, Plasma

Assay type Sandwich (quantitative)

Sensitivity 0.55 pg/ml

Range 1.53 pg/ml - 100 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	92	87% - 95%
Urine	90	86% - 94%
Serum	90	85% - 93%
Hep Plasma	99	92% - 102%
EDTA Plasma	93	87% - 96%
Cit plasma	103	97% - 111%

Assay time	1h 30m
Assay duration	One step assay
Species reactivity	**Reacts with:** Human **Does not react with:** Cow
Product overview	Human CCL18 ELISA Kit (ab211649) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of CCL18 protein in cell culture supernatant, plasma, serum, and urine. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human CCL18 with 0.55 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	Human CCL18 (macrophage inflammatory protein-4) belongs to the C-C motif containing chemokine family and contains a 20 amino acid (aa) signal peptide and a 69 aa residue mature protein. CCL18 was identified as a chemotactic factor for naïve T-cells, CD4+ and CD8+ T-cells, and nonactivated lymphocytes, suggesting that it plays an important role in immune responses. Additionally, MIP4 is mainly induced by Th2 type cytokines, such as IL-4 and IL-13, and inhibited by IFN-γ. High expression of MIP4 is seen in lung, lymph nodes, placenta, and macrophages derived from peripheral blood monocytes. Additionally, MIP4 is found in high levels in serum, plasma, and synovial fluid and in low levels in urine. Currently, a rodent homolog has not been identified.
Platform	Pre-coated microplate (12 x 8 well strips)

Properties

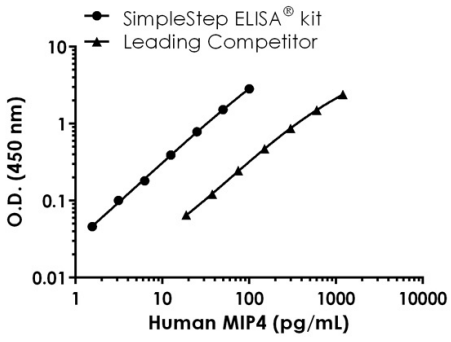
Storage instructions	Store at +4°C. Please refer to protocols.

Components	**1 x 96 tests**
10X Human CCL18 Capture Antibody	1 x 600µl
10X Human CCL18 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml

Components	1 x 96 tests
Antibody Diluent 4BI	1 x 6ml
Human CCL18 Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

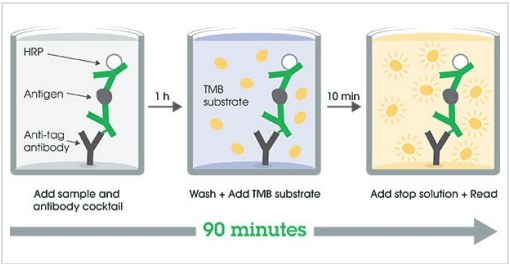
Function	Chemotactic factor that attracts lymphocytes but not monocytes or granulocytes. May be involved in B-cell migration into B-cell follicles in lymph nodes. Attracts naive T-lymphocytes toward dendritic cells and activated macrophages in lymph nodes, has chemotactic activity for naive T-cells, CD4+ and CD8+ T-cells and thus may play a role in both humoral and cell-mediated immunity responses.
Tissue specificity	Expressed at high levels in lung, lymph nodes, placenta, bone marrow, dendritic cells present in germinal centers and T-cell areas of secondary lymphoid organs and macrophages derived from peripheral blood monocytes. Not expressed by peripheral blood monocytes and a monocyte-to-macrophage differentiation is a prerequisite for expression. Expressed in synovial fluids from patients with rheumatoid and septic arthritis and in ovarian carcinoma ascitic fluid.
Sequence similarities	Belongs to the intercrine beta (chemokine CC) family.
Cellular localization	Secreted.

Images



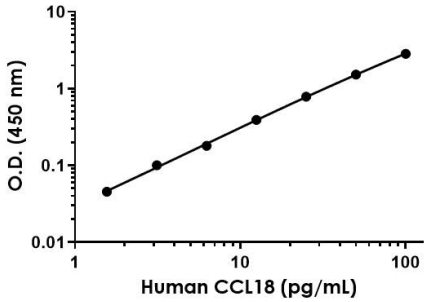
Human MIP4 standard curve comparison data.

Standard curve comparison between human MIP4 SimpleStep ELISA® kit and traditional ELISA kit from leading competitor. SimpleStep ELISA kit shows a 6-fold increase in sensitivity.



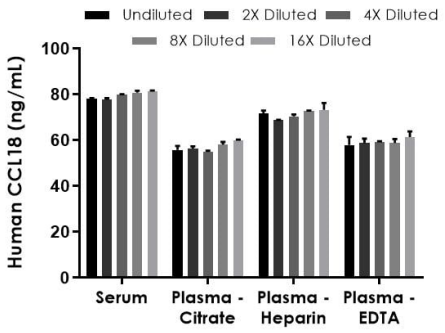
Other - Human CCL18 ELISA Kit (ab211649)

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.



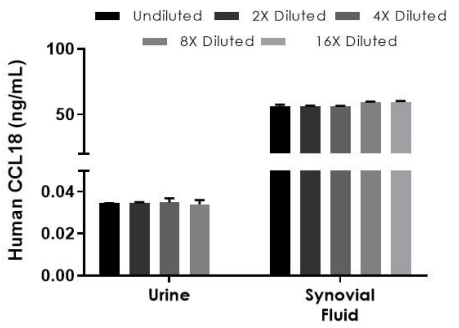
Example of human MIP4 standard curve in Sample Diluent NS

Background-subtracted data values (mean +/- SD) are graphed.



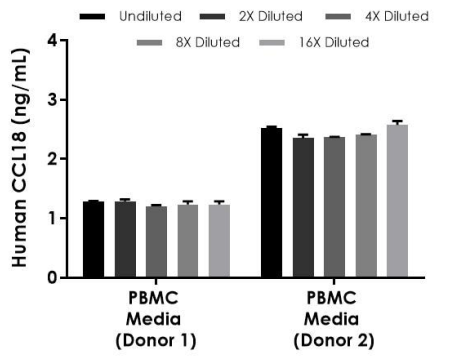
Interpolated concentrations of native MIP4 in human serum and plasma samples

The concentrations of MIP4 were measured in duplicates, interpolated from the MIP4 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 1:1,200, plasma (citrate) 1:600, plasma (EDTA) 1:600, and plasma (heparin) 1:1,200. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean MIP4 concentration was determined to be 79,615 pg/mL in serum, 57,039 pg/mL in plasma (citrate), 59,254 pg/mL in plasma (EDTA) and 71,426 pg/mL in plasma (heparin).



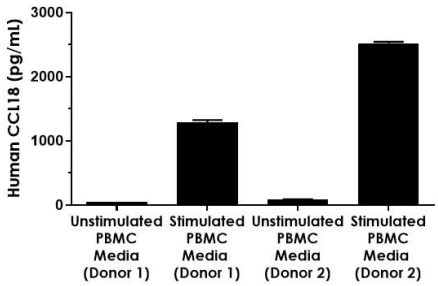
. Interpolated concentrations of native CCL18 in human urine, synovial fluid, and PBMC stimulated media samples.

The concentrations of CCL18 were measured in duplicates, interpolated from the CCL18 standard curves and corrected for sample dilution. Undiluted samples are as follows: urine 50% and synovial fluid 1:600. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CCL18 concentration was determined to be 34.5 pg/mL in urine and 57.6 ng/mL in synovial fluid.



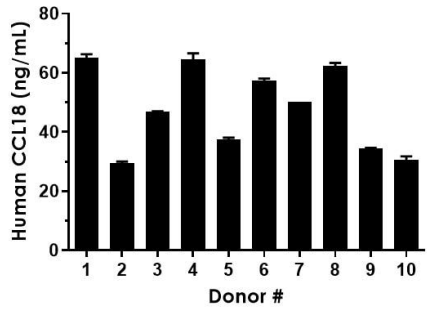
Interpolated concentrations of native CCL18 in human PBMC stimulated media samples.

The concentrations of CCL18 were measured in duplicates, interpolated from the CCL18 standard curves and corrected for sample dilution. Undiluted samples are as follows: PBMC stimulated media (Donor 1) 6.25% and PBMC stimulated media (Donor 2) 3.13%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CCL18 concentration was determined to be 1.25 ng/mL in PBMC stimulated media (Donor 1) and 2.5 ng/mL in PBMC stimulated media (Donor 2). PBMC samples were cultured in RPMI media with 10% fetal bovine serum and 1% PenStrep and stimulated with 1.5% PHA-M for 48 hours.



Interpolated concentrations of native MIP4 in unstimulated versus stimulated samples of PBMC media.

All PBMC media samples were diluted to 3.13% and analyzed. The concentrations of MIP4 were measured in duplicates and interpolated from the MIP4 standard curves and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean MIP4 concentration was determined to be 46 pg/mL in unstimulated PBMC Media (Donor 1), 1,292 pg/mL in stimulated PBMC Media (Donor 1), 87 pg/mL in PBMC unstimulated media (Donor 2), and 2,521 pg/mL in PBMC stimulated media (Donor 2). PBMC samples were cultured in RPMI media with 10% fetal bovine serum and 1% PenStrep (unstimulated samples). Then PBMC samples were stimulated with 1.5% PHA-M for 48 hours.



Serum from ten individual healthy human female donors was measured in duplicate.

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean MIP4 concentration was determined to be 47,858 pg/mL with a range of 29,081 – 66,007 pg/mL.

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