

Human MDC ELISA Kit ab223866

Recombinant SimpleStep ELISA

1 References 9 Images

Overview

Product name	Human MDC ELISA Kit				
Detection method	Colorimetric				
Precision	Intra-assay				
	Sample	n	Mean	SD	CV%
	Serum	5			2.8%
	Inter-assay				
	Sample	n	Mean	SD	CV%
	Serum	3			2.1%
Sample type	Cell culture supernatant, Serum, Hep Plasma, EDTA Plasma, Cit plasma				
Assay type	Sandwich (quantitative)				
Sensitivity	1.3 pg/ml				
Range	3.1 pg/ml - 200 pg/ml				
Recovery	Sample specific recovery				
	Sample type		Average %	Range	
	Cell culture supernatant		111	102% - 121%	
	Serum		108	103% - 115%	
	Cell culture media		100	98% - 102%	
	Hep Plasma		78	60% - 88%	
	EDTA Plasma		89	79% - 106%	
	Cit plasma		118	111% - 131%	

Assay time	1h 30m
Assay duration	One step assay
Species reactivity	Reacts with: Human, Rhesus monkey Does not react with: Cow
Product overview	<p>Human MDC ELISA Kit (ab223866) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of MDC protein in cell culture supernatant, cit plasma, edta plasma, hep plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human MDC with 1.3 pg/ml sensitivity.</p> <p>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:</p> <ul style="list-style-type: none"> - 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 <p>A 384-well SimpleStep ELISA® microplate (ab203359) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.</p>
Notes	Macrophage-derived chemokine (MDC), also known as C-C motif chemokine 22 (CCL22), is a secreted cytokine and member of the intercrine beta (chemokine CC) family. It is highly expressed in macrophage and in monocyte-derived dendritic cells. MDC may play a role in the trafficking of activated/effector T-lymphocytes to inflammatory sites and other aspects of activated T-lymphocyte physiology. MDC is a chemotactic for monocytes, dendritic cells and natural killer cells and potent chemoattractant for chronically activated T-lymphocytes.
Platform	Pre-coated microplate (12 x 8 well strips)

Properties

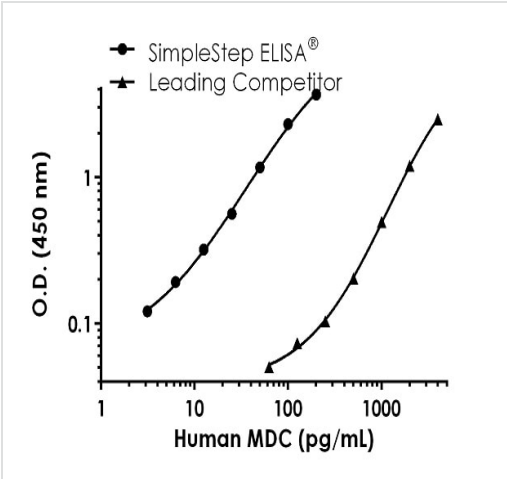
Storage instructions Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Human MDC Capture Antibody	1 x 600µl
10X Human MDC Detector Antibody	1 x 600µl
Human MDC Lyophilized Recombinant Protein	2 vials
Antibody Diluent 4BI	1 x 6ml
10X Wash Buffer PT (ab206977)	1 x 20ml
TMB Development Solution	1 x 12ml

Components	1 x 96 tests
Stop Solution	1 x 12ml
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Plate Seals	1 unit

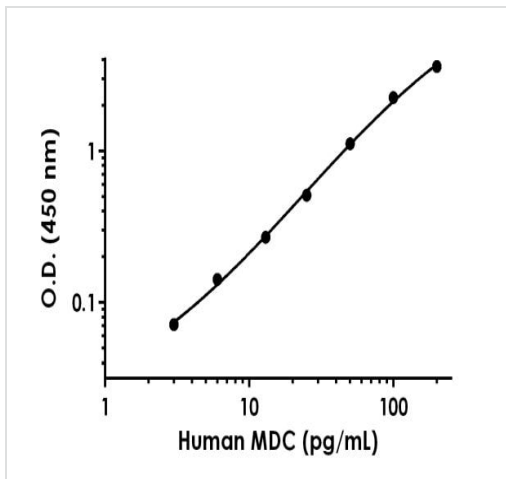
Function	May play a role in the trafficking of activated/effector T-lymphocytes to inflammatory sites and other aspects of activated T-lymphocyte physiology. Chemotactic for monocytes, dendritic cells and natural killer cells. Mild chemoattractant for primary activated T-lymphocytes and a potent chemoattractant for chronically activated T-lymphocytes but has no chemoattractant activity for neutrophils, eosinophils, and resting T-lymphocytes. Binds to CCR4. Processed forms MDC(3-69), MDC(5-69) and MDC(7-69) seem not be active.
Tissue specificity	Highly expressed in macrophage and in monocyte-derived dendritic cells, and thymus. Also found in lymph node, appendix, activated monocytes, resting and activated macrophages. Lower expression in lung and spleen. Very weak expression in small intestine. In lymph node expressed in a mature subset of Langerhans' cells (CD1a+ and CD83+). Expressed in Langerhans' cell histiocytosis but not in dermatopathic lymphadenopathy. Expressed in atopic dermatitis, allergic contact dermatitis skin, and psoriasis, in both the epidermis and dermis.
Sequence similarities	Belongs to the intercrine beta (chemokine CC) family.
Post-translational modifications	The N-terminal processed forms MDC(3-69), MDC(5-69) and MDC(7-69) are produced by proteolytic cleavage after secretion from monocyte derived dendrocytes.
Cellular localization	Secreted.

Images



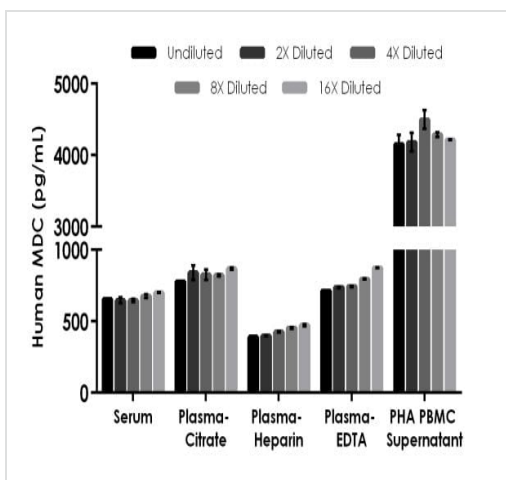
Human MDC standard curve comparison data

Standard curve comparison between human MDC SimpleStep ELISA[®] kit and traditional ELISA kit from leading competitor. SimpleStep ELISA kit shows increased sensitivity.



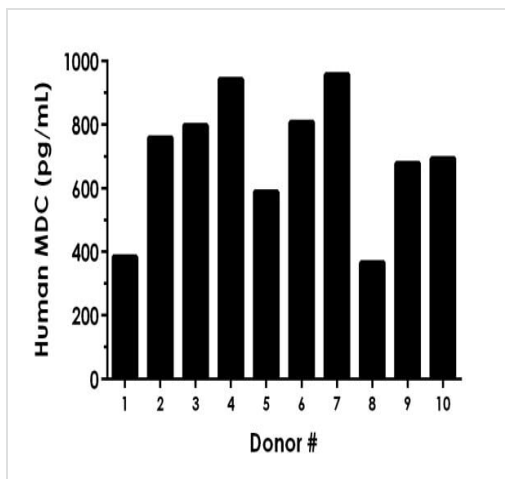
Background-subtracted data values (mean \pm SD) are graphed.

Example of human MDC standard curve in Sample Diluent NS.



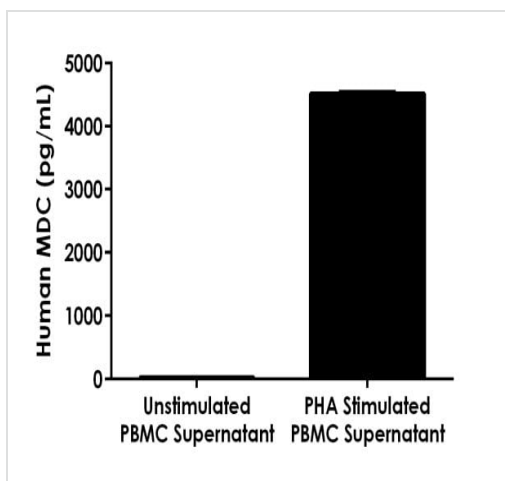
The concentrations of MDC were measured in duplicates, interpolated from the MDC standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 25%, plasma (citrate) 25%, plasma (heparin) 45%, plasma (EDTA) 25%, and 2 days 1.5% PHA-treated PBMC supernatant 4%. The interpolated, dilution factor-corrected values are plotted (mean \pm SD, $n=2$). The mean MDC concentration in neat sample was determined to be 678 pg/mL in serum, 844 pg/mL in plasma (citrate), 435 pg/mL in plasma (heparin), 781 pg/ml in plasma (EDTA), and 4352 pg/ml in PHA-treated PBMC supernatant.

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



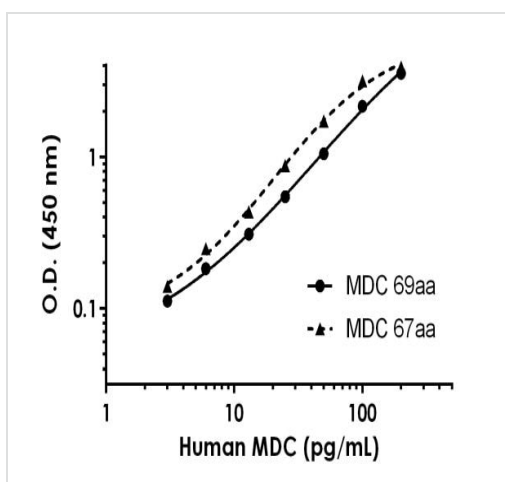
Serum from ten individual healthy human male donors was measured in duplicate.

Interpolated dilution factor corrected values are plotted (mean \pm SD, $n=2$). The mean MDC concentration was determined to be 698 pg/mL with a range of 376 – 967 pg/mL.



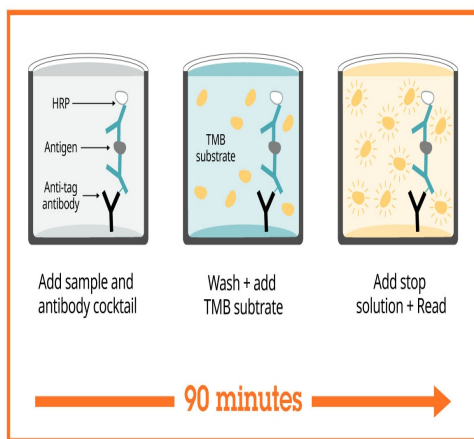
Comparison of MDC in unstimulated and PHA stimulated PBMC cell supernatants.

PBMC cells were cultured for 46 hours in the presence or absence of 1.5% PHA. The concentrations of MDC were measured in three dilutions of supernatant samples in duplicates and interpolated from the MDC standard curve. The interpolated values are plotted (mean \pm SD, $n=3$). The mean MDC concentration was determined to be 4519 pg/mL in neat PHA stimulated PBMC cell culture supernatant and 27 pg/mL in neat unstimulated PBMC cell culture supernatant.



Serial dilutions of recombinant human 67 amino acid long MDC

Serial dilutions of recombinant human 67 amino acid long MDC (aa27-93) were prepared and assayed in parallel with 69 amino acid long MDC (aa25-93), the standard of this kit.



Sandwich ELISA - Human MDC ELISA Kit
(ab223866)

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.

Powered by
recombinant antibodies



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Consistent and reproducible results



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Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Sandwich ELISA - Human MDC ELISA Kit
(ab223866)

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

Get more done with SimpleStep ELISA



Easy to use
Single-wash 90-minute protocol



Flexible
Matched antibody pairs available



Precision antibodies
High sensitivity, specificity and reproducibility



Scalable
Now in 10-pack and 384-well formats

Sandwich ELISA - Human MDC ELISA Kit
(ab223866)

To learn more about the advantages of SimpleStep ELISA® kits see [here](#).

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