

Human CD14 ELISA Kit ab208983

Recombinant SimpleStep ELISA

8 Images

Overview

Product name	Human CD14 ELISA Kit				
Detection method	Colorimetric				
Precision	Intra-assay				
	Sample	n	Mean	SD	CV%
	Human serum	8			2.8%
	Inter-assay				
	Sample	n	Mean	SD	CV%
	Human serum	3			2.1%
Sample type	Cell culture supernatant, Serum, Hep Plasma, EDTA Plasma, Cit plasma				
Assay type	Sandwich (quantitative)				
Sensitivity	4 pg/ml				
Range	31.3 pg/ml - 2000 pg/ml				
Recovery	Sample specific recovery				
	Sample type		Average %		Range
	Cell culture supernatant		102		95% - 106%
	Serum		110		104% - 114%
	Hep Plasma		109		106% - 111%
	EDTA Plasma		110		105% - 115%
	Cit plasma		109		99% - 116%
Assay time	1h 30m				
Assay duration	One step assay				

Species reactivity**Reacts with:** Human**Does not react with:** Goat, Cow, Pig**Product overview**

Human CD14 ELISA Kit (ab208983) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of CD14 protein in cell culture supernatant, cit plasma, edta plasma, hep plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human CD14 with 4 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

CD14 is a LPS-binding glycoprotein primarily expressed on myeloid cells. In response to a gram negative bacterial infection, LPS-activated CD14 leads to the production of inflammatory cytokines. CD14 plays a role in additional cellular functions, including recognition of peptidylglycan from gram positive cells and binding of apoptotic cells to induce phagocytosis.

Platform

Microplate (12 x 8 well strips)

Properties**Storage instructions**

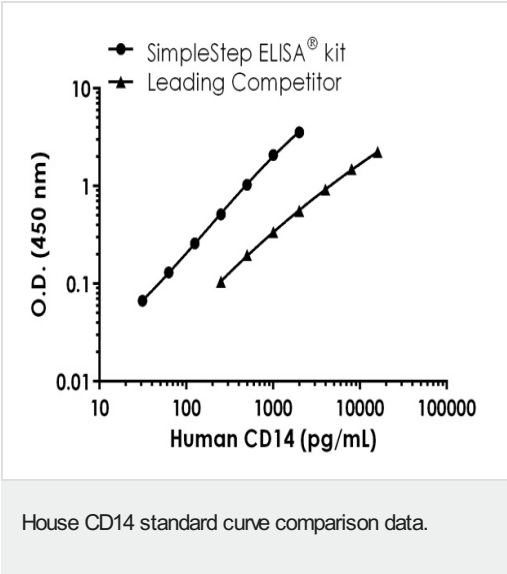
Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Human CD14 Capture Antibody	1 x 600µl
10X Human CD14 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 5BI	1 x 6ml
Human CD14 Lyophilized Recombinant Protein (ab82279)	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit

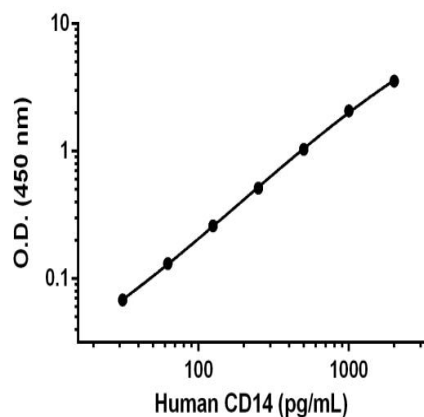
Components	1 x 96 tests
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

Function	Cooperates with MD-2 and TLR4 to mediate the innate immune response to bacterial lipopolysaccharide (LPS). Acts via MyD88, TIRAP and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response. Up-regulates cell surface molecules, including adhesion molecules.
Tissue specificity	Expressed strongly on the surface of monocytes and weakly on the surface of granulocytes; also expressed by most tissue macrophages.
Sequence similarities	Contains 11 LRR (leucine-rich) repeats.
Post-translational modifications	N- and O- glycosylated. O-glycosylated with a core 1 or possibly core 8 glycan.
Cellular localization	Cell membrane.

Images

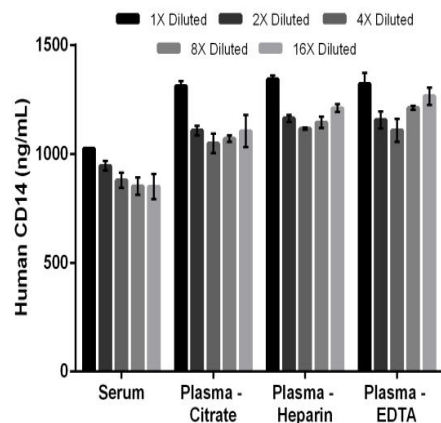


Standard curve comparison between human CD14 SimpleStep ELISA[®] kit and traditional ELISA kit from leading competitor. SimpleStep ELISA kit shows a 30-fold increase in sensitivity.



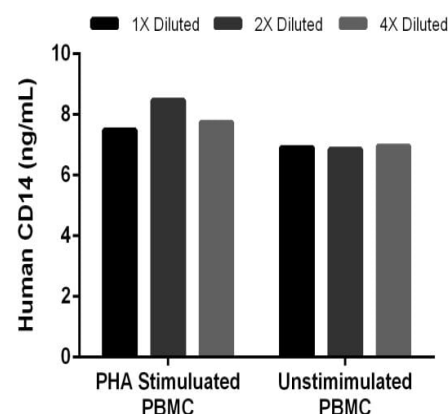
Example of human CD14 standard curve in Sample Diluent NS.

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



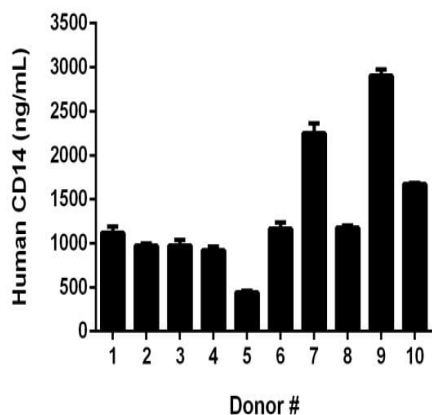
Interpolated concentrations of native CD14 in human serum and plasma samples.

The concentrations of CD14 were measured in duplicates, interpolated from the CD14 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 1:625, plasma (citrate) 1:800, plasma (heparin) 1:800 and plasma (EDTA) 1:800. The interpolated dilution factor corrected values are plotted (mean \pm SD, $n=2$). The mean CD14 concentration was determined to be 897 ng/mL in serum, 1128 ng/mL in plasma (citrate), 1,195 ng/mL in plasma (heparin) and 1,212 ng/mL in plasma (EDTA).



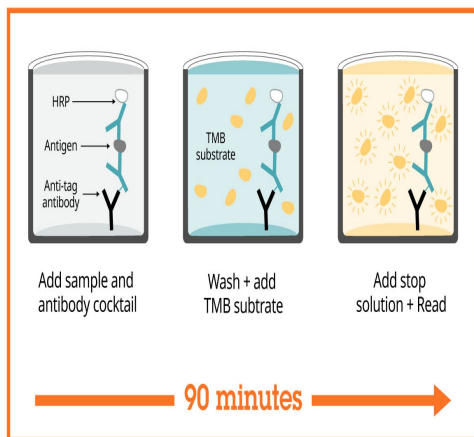
Interpolated concentrations of native CD14 in human stimulated and unstimulated PBMC.

The concentrations of CD14 were measured, interpolated from the CD14 standard curves and corrected for sample dilution. Undiluted samples are as follows: PHA stimulated PBMC 25% and unstimulated PBMC 25%. The interpolated dilution factor corrected values are plotted (mean \pm SD, $n=2$). The mean CD14 concentration was determined to be 7.91 ng/mL in PHA stimulated PBMC and 6.92 ng/mL in unstimulated PBMC.



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

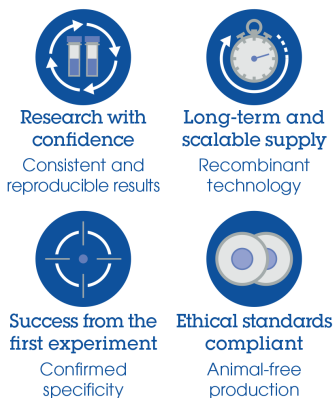
Interpolated dilution factor corrected values are plotted (mean \pm SD, $n=2$). The mean CD14 concentration was determined to be 1,360 ng/mL with a range of 429 – 2,955 ng/mL.



Sandwich ELISA - Human CD14 ELISA Kit
(ab208983)

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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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 CD14 ELISA Kit
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To learn more about the advantages of SimpleStep ELISA® kits see [here](#).

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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