abcam

Product datasheet

Human CXCL5 ELISA Kit ab212163

Recombinant SimpleStep ELISA

9 Images

Overview

Product name Human CXCL5 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Serum	8			3.2%

Inter-assay

Sample	n	Mean	SD	CV%
Serum	3			5%

Sample type Cell culture supernatant, Serum, Hep Plasma, EDTA Plasma, Cit plasma

Assay type Sandwich (quantitative)

Sensitivity 2 pg/ml

Range 15.63 pg/ml - 1000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Serum	89	85% - 96%
Cell culture media	89	82% - 93%
Hep Plasma	105	100% - 107%
EDTA Plasma	98	94% - 104%
Cit plasma	104	94% - 115%

Assay time 1h 30m

Assay duration One step assay

Species reactivity

Reacts with: Human
Does not react with: Cow

Product overview

Human CXCL5 ELISA Kit (ab212163) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of CXCL5 protein in cell culture supernatant, cit plasma, edta plasma, hep plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human CXCL5 with 2 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 CXCL5 is a member of the CXC subfamily of chemokines. Full-length CXCL5 is 114 amino acids (aa) long including a 36 aa signal peptide. This signal peptide is cleaved to produce the 78 aa residue secreted protein (ENA-78). ENA-78 is 52%, 48%, and 51% identical in aa sequence to human GROα, GROβ, and GROγ, respectively. CXCL5 is expressed by fibroblasts and is induced by bacterial lipopolysaccharides. Additionally, this chemokine is a potent chemotaxin involved in neutrophil activation. Furthermore, CXCL5 is produced concomitantly with Interleukin 8 (IL8) in response to stimulation with either Interleukin 1 (IL1) or Tumor Necrosis Factor alpha.

Platform

Pre-coated microplate (12 x 8 well strips)

Properties

Storage instructions

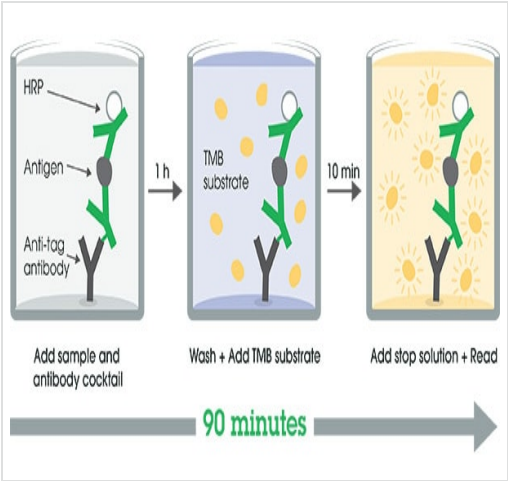
Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Human CXCL5 Capture Antibody	1 x 600µl
10X Human CXCL5 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 5BI	1 x 6ml
Human CXCL5 Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit

Components	1 x 96 tests
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

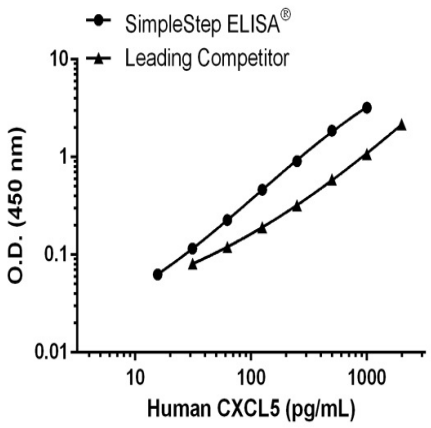
Function	Involved in neutrophil activation. In vitro, ENA-78(8-78) and ENA-78(9-78) show a threefold higher chemotactic activity for neutrophil granulocytes.
Sequence similarities	Belongs to the intercrine alpha (chemokine CxC) family.
Post-translational modifications	N-terminal processed forms ENA-78(8-78) and ENA-78(9-78) are produced by proteolytic cleavage after secretion from peripheral blood monocytes.
Cellular localization	Secreted.

Images



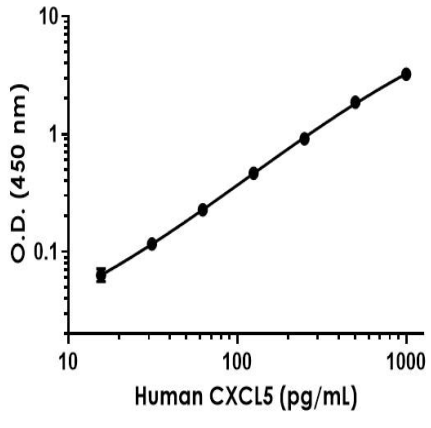
Other - Human CXCL5 ELISA Kit (ab212163)

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.



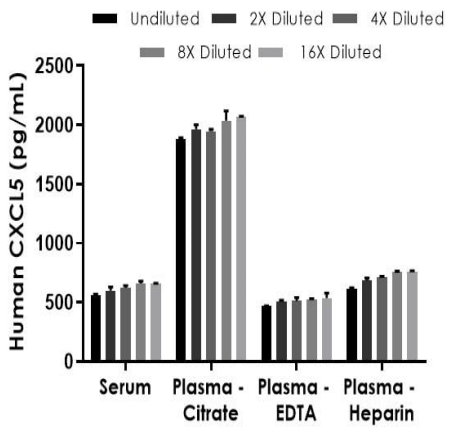
Human CXCL5 standard curve comparison data.

Standard curve comparison between human CSCL5 SimpleStep ELISA® kit and traditional ELISA kit from leading competitor. SimpleStep ELISA kit shows a 6-fold increase in sensitivity.



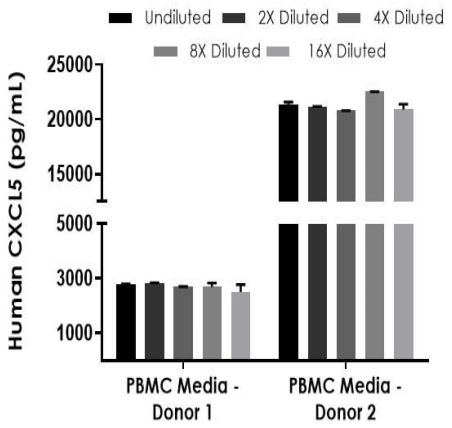
Example of human CXCL5 standard curve.

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



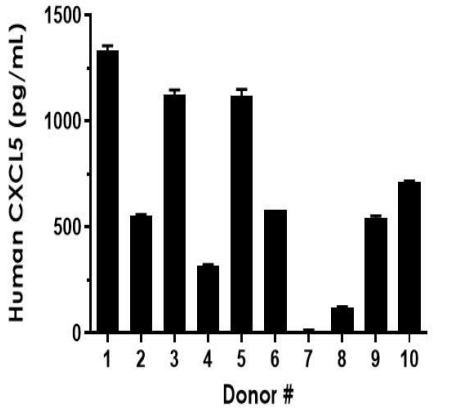
Interpolated concentrations of native CXCL5 in human serum and plasma samples.

The concentrations of CXCL5 were measured in duplicates, interpolated from the CXCL5 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 100%, plasma (citrate) 50%, plasma (EDTA) 50% and plasma (heparin) 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CXCL5 concentration was determined to be 622.1 pg/mL in serum, 1,977.3 pg/mL in plasma (citrate), 511.4 pg/mL in plasma (EDTA) and 706.2 pg/mL in plasma (heparin).



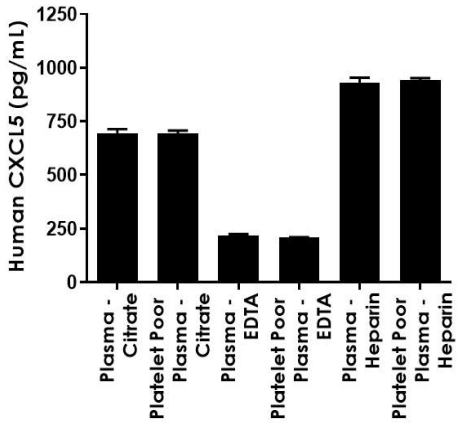
Interpolated concentrations of native CXCL5 in human PBMC stimulated media samples from two different donors.

The concentrations of CXCL5 were measured in duplicates, interpolated from the CXCL5 standard curves and corrected for sample dilution. Undiluted samples are as follows: PBMC media (Donor 1) 10% and PBMC media (Donor 2) 2.5%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CXCL5 concentration was determined to be 2,702.1 pg/mL in PBMC media (Donor 1), and 21,336.6 pg/mL in PBMC media (Donor 2).



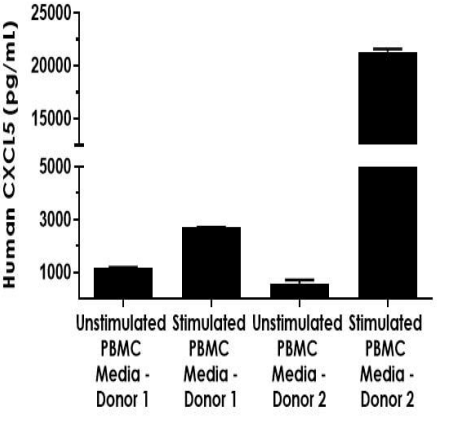
Serum from ten individual healthy human female donors was measured in duplicate.

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CXCL5 concentration was determined to be 641.9 pg/mL with a range of 14.1 – 1,315.6 pg/mL.



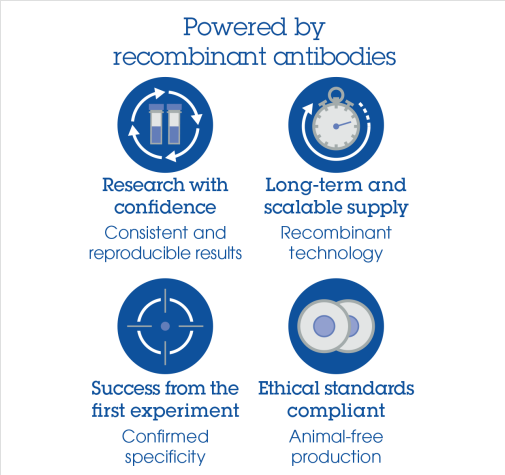
Plasma from three individual healthy human donors (pooled gender) was collected and centrifuged for 15 minutes at 1,000 x g.

Half of the volume of each sample was then additionally centrifuged at 10,000 x g for 10 minutes at 4^{o}C to remove platelets (platelet poor). All plasma samples were diluted 1:2 in Sample Diluent NS and measured in duplicate. Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CXCL5 concentration was determined to be 825 pg/mL in plasma (citrate), 852.0 pg/mL in platelet poor plasma (citrate), 255 pg/mL in plasma (EDTA), 254.2 pg/mL in platelet poor plasma (EDTA), 1,067.8 pg/mL in plasma (heparin), and 1,065.2 pg/mL in platelet poor plasma (heparin).



Interpolated concentrations of native CXCL5 in human PBMC media samples from two different donors.

All samples were diluted 1:40 and the concentrations of CXCL5 were measured in duplicates, interpolated from the CXCL5 standard curves and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CXCL5 concentration was determined to be 1,188.3 pg/mL in PBMC unstimulated media (Donor 1), 2,702.2 pg/mL in PBMC stimulated media (Donor 1), 567.2 pg/mL in PBMC unstimulated media (Donor 2), and 21,325.6 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.



Sandwich ELISA - Human CXCL5 ELISA Kit

(ab212163)

To learn more about the advantages of recombinant antibodies see **here**.

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