

## Product datasheet

# Human CXCL7 / PBP ELISA Kit ab216171

Recombinant SimpleStep ELISA

[7 Images](#)

### Overview

**Product name** Human CXCL7 / PBP ELISA Kit

**Detection method** Colorimetric

#### Precision

Intra-assay

Sample	n	Mean	SD	CV%
Plasma	8			3.1%

Inter-assay

Sample	n	Mean	SD	CV%
Plasma	3			4.9%

**Sample type**

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

**Assay type**

Sandwich (quantitative)

**Sensitivity**

0.51 pg/ml

**Range**

4.69 pg/ml - 300 pg/ml

**Recovery**

Sample specific recovery

Sample type	Average %	Range
Serum	90	84% - 95%
Hep Plasma	88	84% - 90%
EDTA Plasma	94	89% - 99%
Cit plasma	94	92% - 96%

**Assay time**

1h 30m

**Assay duration**

One step assay

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

Human CXCL7 / PBP ELISA Kit (ab216171) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of CXCL7 / PBP protein in cell culture supernatant, cit plasma, edta plasma, hep plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human CXCL7 / PBP with 0.51 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**

CXCL7 / PBP is a platelet-derived growth factor that belongs to the CXC chemokine family. It is a potent chemoattractant and activator of neutrophils and has been shown to stimulate various cellular processes including DNA synthesis, mitosis, glycolysis, intracellular cAMP accumulation, and prostaglandin E2 secretion. It also stimulates the formation and secretion of plasminogen activator by synovial cells. Mouse and rat CXCL7 / PBP both have 66% sequence homology compared to human CXCL7 / PBP.

Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.

It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

**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 CXCL7 Detector Antibody	1 x 600µl
10X Human CXCL7 Capture Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml

Components	1 x 96 tests
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent 5BI	1 x 6ml
Human CXCL7 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

LA-PF4 stimulates DNA synthesis, mitosis, glycolysis, intracellular cAMP accumulation, prostaglandin E2 secretion, and synthesis of hyaluronic acid and sulfated glycosaminoglycan. It also stimulates the formation and secretion of plasminogen activator by human synovial cells. NAP-2 is a ligand for CXCR1 and CXCR2, and NAP-2, NAP-2(73), NAP-2(74), NAP-2(1-66), and most potent NAP-2(1-63) are chemoattractants and activators for neutrophils. TC-1 and TC-2 are antibacterial proteins, in vitro released from activated platelet alpha-granules. CTAP-III(1-81) is more potent than CTAP-III desensitize chemokine-induced neutrophil activation.

## Sequence similarities

Belongs to the intercrine alpha (chemokine CxC) family.

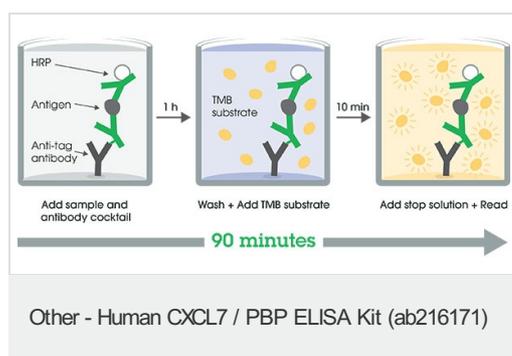
## Post-translational modifications

Proteolytic removal of residues 1-9 produces the active peptide connective tissue-activating peptide III (CTAP-III) (low-affinity platelet factor IV (LA-PF4)).  
 Proteolytic removal of residues 1-13 produces the active peptide beta-thromboglobulin, which is released from platelets along with platelet factor 4 and platelet-derived growth factor.  
 NAP-2(1-66) is produced by proteolytical processing, probably after secretion by leukocytes other than neutrophils.  
 NAP-2(73) and NAP-2(74) seem not be produced by proteolytical processing of secreted precursors but are released in an active form from platelets.

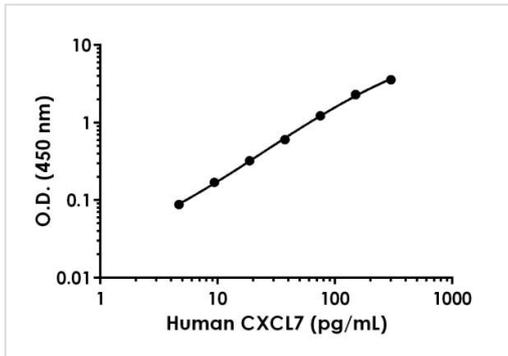
## Cellular localization

Secreted.

## Images

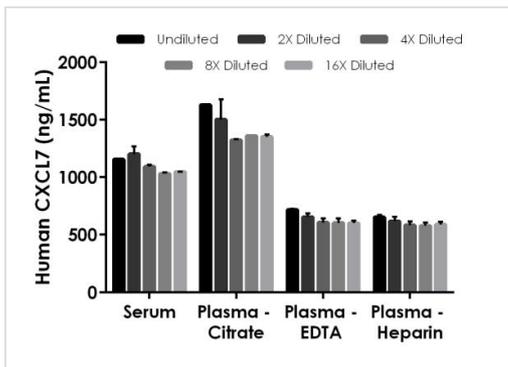


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



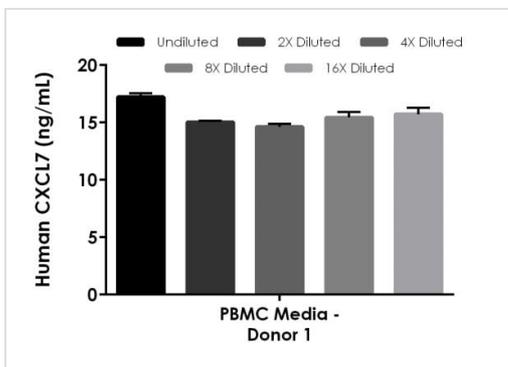
Example of human CXCL7 standard curve.

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



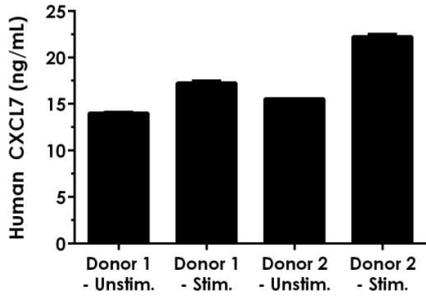
Interpolated concentrations of native CXCL7 in human serum and plasma samples.

The concentrations of CXCL7 were measured in duplicates, interpolated from the CXCL7 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 1:4,000, plasma (citrate) 1:8,000, plasma (EDTA) 1:3,000, and plasma (heparin) 1:3,000. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CXCL7 concentration was determined to be 1,106 ng/mL in neat serum, 1,434 ng/mL in neat plasma (citrate), 636 ng/mL in neat plasma (EDTA), and 604 ng/mL in neat plasma (heparin).



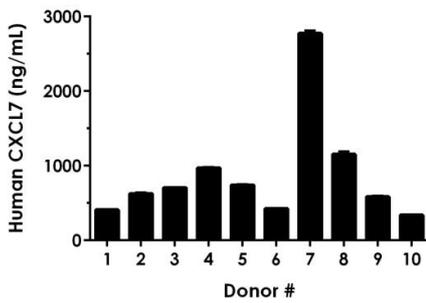
Interpolated concentrations of native CXCL7 in human cell culture supernatant samples.

The concentrations of CXCL7 were measured in duplicates, interpolated from the CXCL7 standard curves and corrected for sample dilution. Undiluted samples are as follows: PBMC supernatant 1:64. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CXCL7 concentration was determined to be 15.61 ng/mL in neat PBMC supernatant.



Interpolated concentrations of native CXCL7 in unstimulated versus stimulated human cell culture supernatant samples.

PBMC media samples were cultured in RPMI media with 10% Fetal Bovine Serum for 48 hours without (unstimulated) or with (stimulated) 1.5% PHA-M.



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

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CXCL7 concentration was determined to be 873 ng/mL with a range of 335 – 2800 ng/mL in neat human serum.

Powered by recombinant antibodies

 <p><b>Research with confidence</b> Consistent and reproducible results</p>	 <p><b>Long-term and scalable supply</b> Recombinant technology</p>
 <p><b>Success from the first experiment</b> Confirmed specificity</p>	 <p><b>Ethical standards compliant</b> Animal-free production</p>

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

Sandwich ELISA - Human CXCL7 / PBP ELISA Kit (ab216171)

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