

Product datasheet

Mouse CXCL1 ELISA Kit ab216951

SimpleStep ELISA[®]

[2 References](#) [7 Images](#)

Overview

Product name Mouse CXCL1 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Mouse serum	8			6.8%

Inter-assay

Sample	n	Mean	SD	CV%
Mouse serum	3			10.1%

Sample type

Cell culture supernatant, Serum, Cell culture extracts, Heparin Plasma, EDTA Plasma, Citrate Plasma

Assay type

Sandwich (quantitative)

Sensitivity

0.66 pg/ml

Range

5.47 pg/ml - 350 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Serum	91	88% - 94%
Cell culture extracts	95	95% - 96%
Cell culture media	110	109% - 110%
Heparin Plasma	79	72% - 90%
EDTA Plasma	94	89% - 98%

Sample type	Average %	Range
Citrate Plasma	94	92% - 97%

Assay time

1h 45m

Assay duration

Multiple steps standard assay

Species reactivity

Reacts with: Mouse

Does not react with: Cow, Human

Product overview

CXCL1 *in vitro* ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of mouse CXCL1 protein in serum, plasma, cell culture supernatant, and cell extract samples.

The ELISA employs an affinity tag labeled capture antibody and a reporter conjugated detector antibody. The capture antibody is incubated with the sample and then after washing, the detector antibody is added to the wells. After incubation, the wells are washed to remove unbound material. TMB substrate is added and during incubation is catalyzed by HRP, generating blue coloration. This reaction is then stopped by addition of Stop Solution completing any color change from blue to yellow. Signal is generated proportionally to the amount of bound analyte and the intensity is measured at 450 nm. Optionally, instead of the endpoint reading, development of TMB can be recorded kinetically at 600 nm.

Sensitivity:

Samples in 1X Cell Extraction Buffer PTR: 0.70 pg/mL

Samples in Sample Diluent NS: 0.66 pg/mL

Notes

CXCL1 is a member of the CXC family of chemokines. Chemokines play roles in normal and pathological processes including allergic responses, angiogenesis, inflammation, tumor growth and metastasis. Mouse CXCL2 and CXCL3 share 67% and 60% sequence homology with mouse CXCL1, respectively. Additionally, Rat CXCL1 is 89% homologous with mouse CXCL1.

Tested applications

Suitable for: Sandwich ELISA

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 Mouse CXCL1 Capture Antibody	1 x 600µl
10X Mouse CXCL1 Detector Antibody	1 x 600µl
10X Wash Buffer PT	1 x 30ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml

Components	1 x 96 tests
Antibody Diluent CPI	2 x 6ml
Mouse CXCL1 Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

Function	Has chemotactic activity for neutrophils. May play a role in inflammation and exerts its effects on endothelial cells in an autocrine fashion. In vitro, the processed forms GRO-alpha(4-73), GRO-alpha(5-73) and GRO-alpha(6-73) show a 30-fold higher chemotactic activity.
Sequence similarities	Belongs to the intercrine alpha (chemokine CxC) family.
Post-translational modifications	N-terminal processed forms GRO-alpha(4-73), GRO-alpha(5-73) and GRO-alpha(6-73) are produced by proteolytic cleavage after secretion from peripheral blood monocytes.
Cellular localization	Secreted.

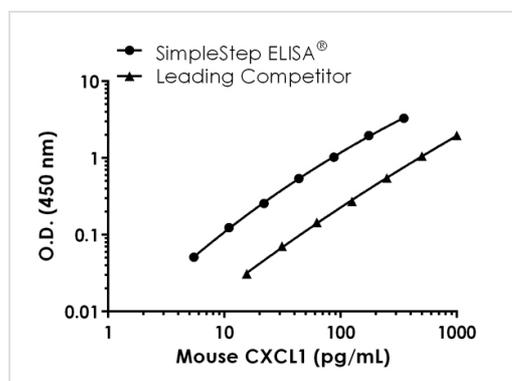
Applications

Our [Abpromise guarantee](#) covers the use of **ab216951** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

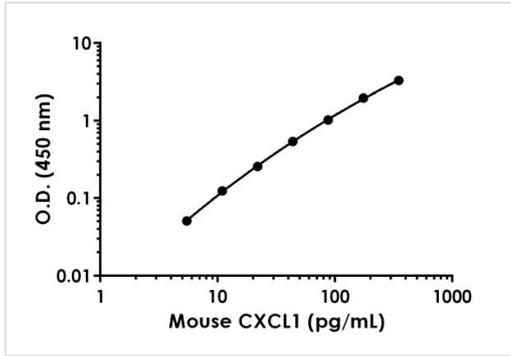
Application	Abreviews	Notes
Sandwich ELISA		Use at an assay dependent concentration.

Images



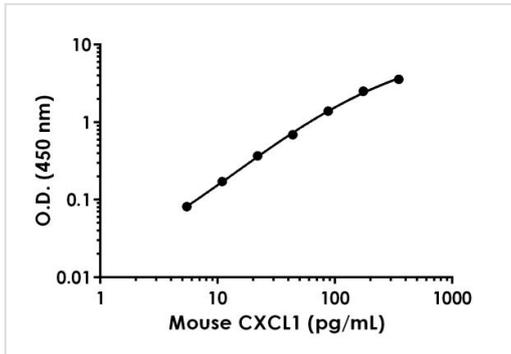
Mouse CXCL1 standard curve comparison data

Standard curve comparison between mouse CXCL1 SimpleStep ELISA® kit and traditional ELISA kit from leading competitor. SimpleStep ELISA kit shows a 2-fold sensitivity.



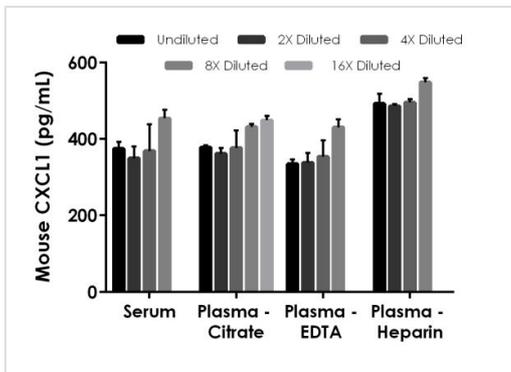
Background-subtracted data values (mean +/- SD) are graphed.

Example of mouse CXCL1 standard curve in Sample Diluent NS.



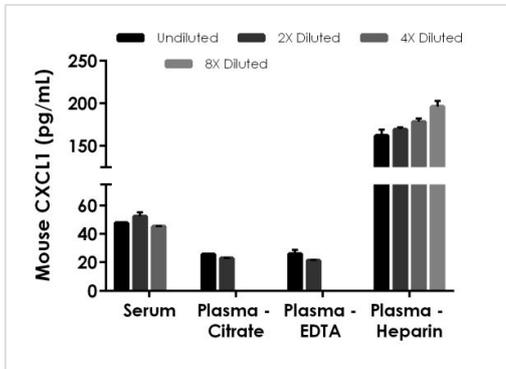
Background-subtracted data values (mean +/- SD) are graphed.

Example of mouse CXCL1 standard curve in 1X Cell Extraction Buffer PTR.



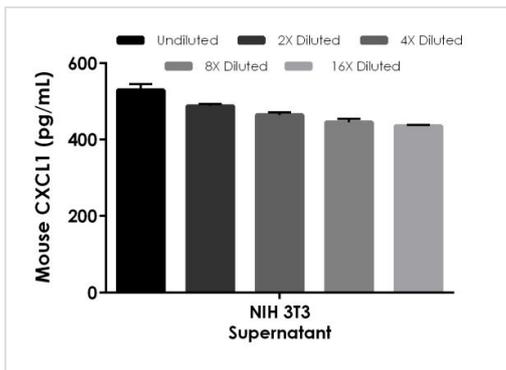
The concentrations of CXCL1 were measured in duplicates, interpolated from the CXCL1 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 50%, plasma (citrate) 50%, plasma (EDTA) 50%, and plasma (heparin) 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CXCL1 concentration was determined to be 386.84 pg/mL in neat serum, 399.45 pg/mL in neat plasma (citrate), 364.34 pg/mL in neat plasma (EDTA), and 505.80 pg/mL in neat plasma (heparin).

Interpolated concentrations of spiked CXCL1 in mouse serum and plasma samples.



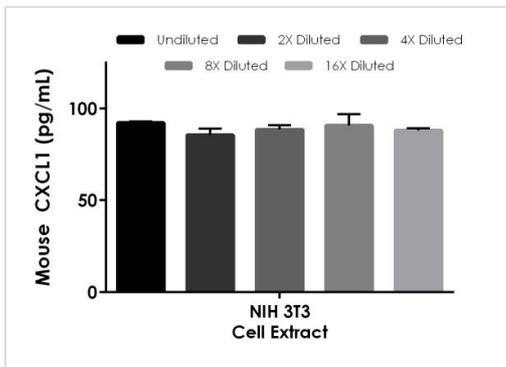
Interpolated concentrations of native CXCL1 in mouse serum and plasma samples.

The concentrations of CXCL1 were measured in duplicates, interpolated from the CXCL1 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 50%, plasma (citrate) 50%, plasma (EDTA) 50%, and plasma (heparin) 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CXCL1 concentration was determined to be 48.56 pg/mL in neat serum, 24.34 pg/mL in neat plasma (citrate), 23.67 pg/mL in neat plasma (EDTA), and 176.56 pg/mL in neat plasma (heparin).



Interpolated concentrations of native CXCL1 in mouse NIH 3T3 cell culture supernatant sample.

The concentrations of CXCL1 were measured in duplicates, interpolated from the CXCL1 standard curves and corrected for sample dilution. Undiluted samples are as follows: NIH 3T3 supernatant 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CXCL1 concentration was determined to be 472.88 pg/mL in neat mouse NIH 3T3 cell culture supernatant.



Interpolated concentrations of native CXCL1 in mouse NIH 3T3 cell extract sample based on a 500 µg/mL extract load.

The concentrations of CXCL1 were measured in duplicate and interpolated from the CXCL1 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CXCL1 concentration was determined to be 89.05 pg/mL in mouse NIH 3T3 cell extract sample.

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