

### Mouse IP-10 ELISA Kit (CXCL10) ab260067

SimpleStep ELISA

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#### Overview

**Product name** Mouse IP-10 ELISA Kit (CXCL10)

**Detection method** Colorimetric

**Precision**

Intra-assay

Sample	n	Mean	SD	CV%
Supernatant	8			8%

Inter-assay

Sample	n	Mean	SD	CV%
Supernatant	3			10.6%

**Sample type** Cell culture supernatant, Serum, Cit plasma

**Assay type** Sandwich (quantitative)

**Sensitivity** 21.75 pg/ml

**Range** 64 pg/ml - 4100 pg/ml

**Recovery**

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	104	93% - 115%
Serum	95	92% - 102%
Cit plasma	89	84% - 99%

**Assay time** 1h 30m

**Assay duration** One step assay

**Species reactivity** **Reacts with:** Mouse

**Product overview**

Mouse IP-10 ELISA Kit (CXCL10) (ab260067) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of IP-10 (CXCL10) protein in cell culture supernatant,

cit plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Mouse IP-10 (CXCL10) with 21.75 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.

**ASSAY SPECIFICITY:** This kit recognizes both native and recombinant mouse IP-10 protein in serum, citrate plasma, and cell culture supernatant samples only.

Cell and tissue extract samples have not been tested with this kit.

This kit is incompatible with heparin plasma and EDTA plasma samples.

**CROSS REACTIVITY:** Recombinant human IP-10 and rat IP-10 were each prepared at 50 ng/mL and 1.5 ng/mL and assayed for cross reactivity. No cross reactivity was observed.

**SPECIES REACTIVITY:** This kit recognizes mouse IP-10 protein.

No signal was observed in 50% serum samples from the following species: Human, Rat, Cow.

**Notes** C-X-C motif chemokine 10 (CXCL10 or IP-10) is a small 10.8kD protein that is secreted by several cell types in response to interferon-gamma (IFN $\gamma$ ). These cell types include monocytes, endothelial cells and fibroblasts. Upon secretion, CXCL10 is cleaved into an 8.7kD biologically active protein to function in chemotaxis for T-cells, NK cells, monocytes/macrophages and dendritic cells. In addition, CXCL10 has antitumor activity through the inhibition of bone marrow colony formation and angiogenesis. CXCL10 elicits its effects by binding to the cell surface chemokine receptor 3 (CXCR3).

**Platform** Pre-coated microplate (12 x 8 well strips)

## Properties

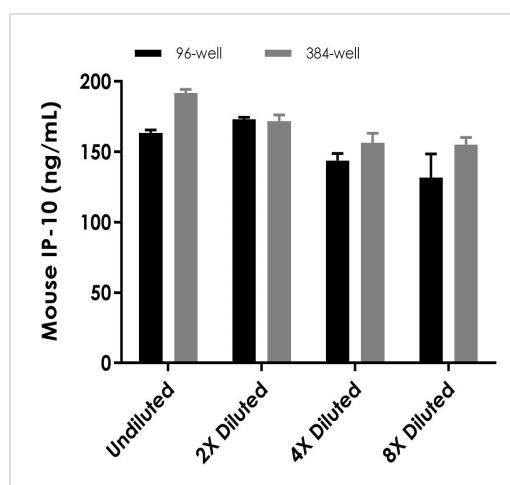
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**Storage instructions** Store at +4°C. Please refer to protocols.

Components	1 x 96 tests	1 x 384 tests
10X Mouse IP-10 (CXCL10) Capture Antibody	1 x 600µl	1 x 600µl
10X Mouse IP-10 (CXCL10) Detector Antibody	1 x 600µl	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml	1 x 20ml
384 well CaptSure™ microplates	0 x 0 unit	1 unit
Antibody Diluent 5BR	1 x 6ml	1 x 6ml
Mouse IP-10 (CXCL10) Lyophilized Recombinant Protein	2 vials	2 vials
Plate Seals	1 unit	1 unit
Sample Diluent NS (ab193972)	1 x 12ml	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit	0 x 0 unit
Stop Solution	1 x 12ml	2 x 12ml
TMB Development Solution	1 x 12ml	2 x 12ml

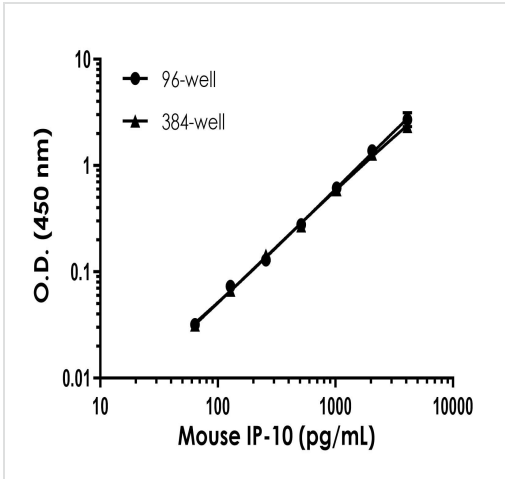
<b>Function</b>	Chemotactic for monocytes and T-lymphocytes. Binds to CXCR3.
<b>Sequence similarities</b>	Belongs to the intercrine alpha (chemokine CxC) family.
<b>Post-translational modifications</b>	CXCL10(1-73) is produced by proteolytic cleavage after secretion from keratinocytes.
<b>Cellular localization</b>	Secreted.

## Images



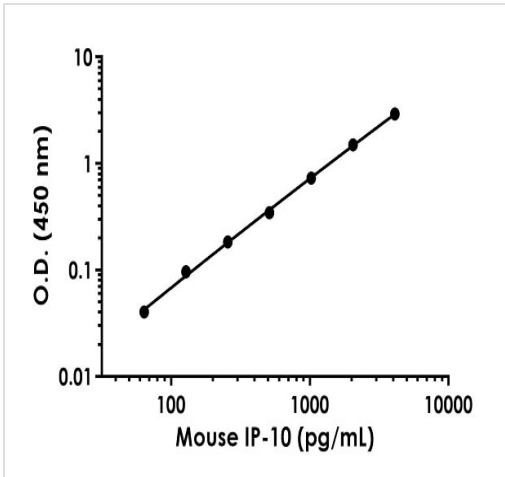
Sandwich ELISA - Mouse IP-10 ELISA Kit (CXCL10) (ab260067)

Interpolated concentration of native IP-10 was measured in duplicate at different sample concentrations in 96-well vs. 384-well plates. Undiluted samples are 0.75% stimulated RAW264.7 supernatant (1 µg/mL LPS for 48 hrs). The interpolated dilution factor corrected (to neat) values are plotted (mean +/- SD, n=2). Sample dilutions are made in Sample Diluent NS.



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Example of mouse IP-10 standard curve in 96-well vs. 384-well plate. Background-subtracted data values (mean +/- SD) are graphed.



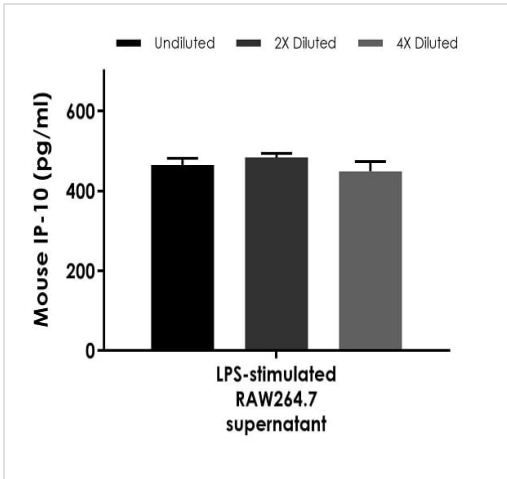
Example of mouse IP-10 standard curve in Sample Diluent NS.

The IP-10 standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.

Standard Curve Measurements			
Concentration (pg/mL)	O.D 450 nm		Mean O.D
	1	2	
0	0.068	0.064	0.066
64	0.111	0.104	0.107
128	0.159	0.168	0.164
256	0.247	0.254	0.250
513	0.413	0.411	0.412
1,025	0.800	0.798	0.799
2,050	1.563	1.574	1.568
4,100	2.938	3.046	2.992

Standard curve

Example of mouse IP-10 standard curve in Sample Diluent NS. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



Interpolated concentrations of native IP-10 in mouse RAW264.7 cell culture supernatant samples stimulated with 1 µg/mL for 18 hours.

The concentrations of IP-10 were measured in duplicates, interpolated from the IP-10 standard curves and corrected for sample dilution. Undiluted samples are as follows: RAW264.7 supernatant 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean IP-10 concentration was determined to be 442.08 pg/mL in RAW264.7 supernatant.

Dilution Factor	Interpolated value	100% LPS-stimulated RAW264.7 supernatant
Undiluted	pg/mL	441
	% Expected value	100
2	pg/mL	229
	% Expected value	104
4	pg/mL	107
	% Expected value	97

Linearity of dilution.

Linearity of dilution is determined based on interpolated values from the standard curve. Linearity of dilution defines a sample concentration interval in which interpolated target concentrations are directly proportional to sample dilution.

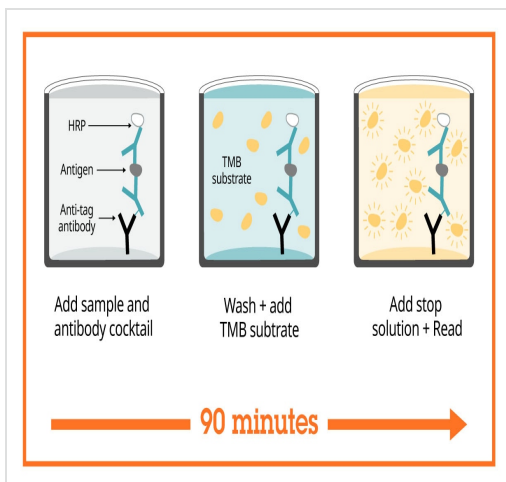
Native IP-10 was measured in the following biological samples in a 2-fold dilution series. Sample dilutions are made in Sample Diluent NS.

Dilution Factor	Interpolated value	50% Mouse Serum	25% Mouse Plasma (Citrate)	95% LPS-stimulated RAW264.7 Supernatant
Undiluted	pg/mL	1,718	1,773	3,386
	% Expected value	100	100	100
2	pg/mL	929	975	1,376
	% Expected value	108	110	81
4	pg/mL	487	495	700
	% Expected value	113	112	83
8	pg/mL	233	224	393
	% Expected value	108	101	93
16	pg/mL	103	112	210
	% Expected value	96	101	99

Linearity of dilution.

Recombinant IP-10 was spiked into the following biological samples and diluted in a 2-fold dilution series in Sample Diluent NS.




Neat pooled serum and plasma (citrate) samples from healthy donors was measured in duplicate. All values were below the detectable range of the assay.



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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.

**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

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

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

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