

Mouse IL-18 ELISA Kit ab216165

Recombinant SimpleStep ELISA<sup>®</sup>

42 References 14 Images

Overview

Product name	Mouse IL-18 ELISA Kit				
Detection method	Colorimetric				
Precision	Intra-assay				
	Sample	n	Mean	SD	CV%
	Overall	5			2.4%
	Inter-assay				
	Sample	n	Mean	SD	CV%
	Overall	3			7.8%
Sample type	Cell culture supernatant, Serum, Cell culture extracts, Tissue Extracts, Hep Plasma, EDTA Plasma, Cit plasma				
Assay type	Sandwich (quantitative)				
Sensitivity	10.5 pg/ml				
Range	31.3 pg/ml - 2000 pg/ml				
Recovery	Sample specific recovery				

Sample type	Average %	Range
Serum	100	88% - 115%
Cell culture extracts	100	91% - 108%
Tissue Extracts	110	102% - 117%
Cell culture media	107	103% - 113%
Hep Plasma	90	88% - 95%
EDTA Plasma	87	84% - 91%

Sample type	Average %	Range
Cit plasma	88	86% - 97%

**Assay time**

1h 30m

**Assay duration**

One step assay

**Species reactivity**

**Reacts with:** Mouse

**Does not react with:** Cow

**Product overview**

Mouse IL-18 ELISA Kit (ab216165) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of IL-18 protein in cell culture extracts, cell culture supernatant, cit plasma, edta plasma, hep plasma, serum, and tissue extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate Mouse IL-18 with 10.5 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 IL-18 protein in serum, plasma, and cell culture supernatant, cell and tissue extract samples only.

**CROSS REACTIVITY**

Recombinant human IL-18 and mouse IL-18BP were prepared at 50 ng/mL and 1 ng/mL and assayed for cross reactivity. No cross-reactivity was observed.

**INTERFERENCE**

Recombinant human IL-18 and mouse IL-18BP were prepared at 50 ng/mL and 1 ng/mL and tested for interference. No interference with was observed.

**SPECIES REACTIVITY**

This kit recognizes mouse IL-18 protein.

Other species reactivity was determined by measuring 50% serum samples of various species, interpolating the protein concentrations from the mouse standard curve, and expressing the interpolated concentrations as a percentage of the protein concentration in mouse serum assayed at the same dilution.

Reactivity < 3% was determined for the following species: Human, Rat, Cow

**Notes** Interleukin-18 (IL-18 or Interferon gamma-inducing factor) is a proinflammatory cytokine in the IL-1 superfamily. IL-18 has overlapping and synergistic biological function with IL-12. IL-18 is found in both intracellular and extracellular compartments. The antibodies in this kit were raised to the mature full-length sequence of mouse IL-18.

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

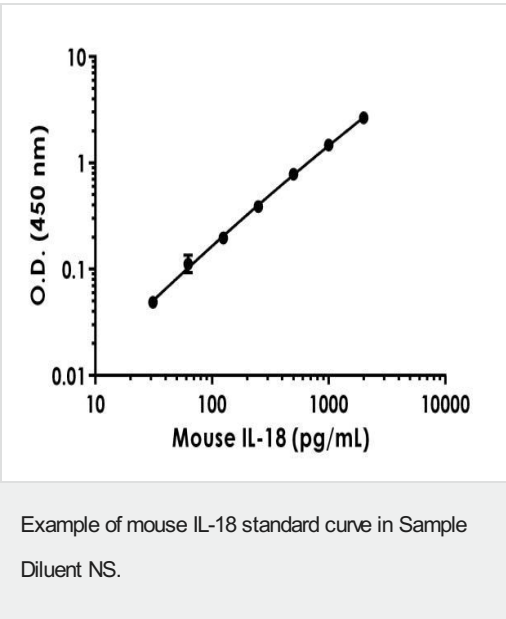
**Storage instructions** Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Mouse IL-18 Capture Antibody	1 x 600µl
10X Mouse IL-18 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent 4BI	1 x 6ml
Mouse IL-18 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** Augments natural killer cell activity in spleen cells and stimulates interferon gamma production in T-helper type I cells.

**Sequence similarities** Belongs to the IL-1 family.

Images

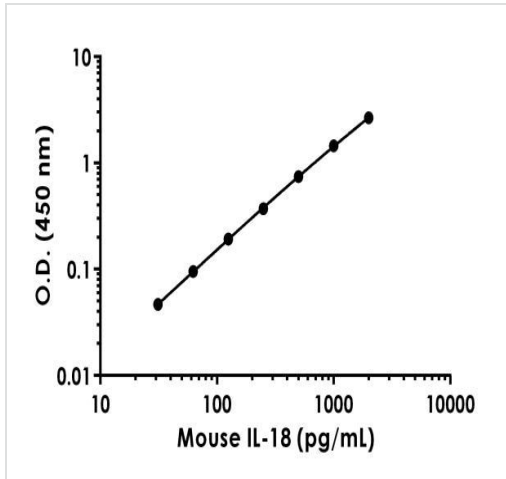


Background-subtracted data values (mean +/- SD) are graphed.

Standard Curve Measurements			
Concentration (pg/mL)	O.D 450 nm		Mean O.D
	1	2	
0	0.063	0.065	0.064
31.3	0.113	0.114	0.113
62.5	0.162	0.193	0.177
125	0.261	0.261	0.261
250	0.455	0.450	0.452
500	0.831	0.862	0.847
1,000	1.515	1.568	1.542
2000	2.743	2.703	2.723

. Example of mouse IL-18 standard curve in Sample Diluent NS.

The IL-18 standard curve was prepared as described. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



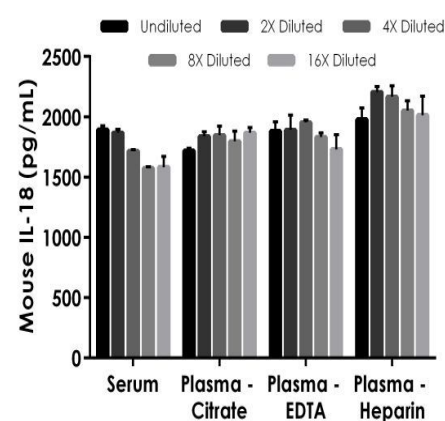
Example of mouse IL-18 standard curve in 1X Cell Extraction Buffer PTR.

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

Standard Curve Measurements			
Concentration (pg/mL)	O.D 450 nm		Mean O.D
	1	2	
0	0.055	0.055	0.055
31.3	0.103	0.101	0.102
62.5	0.150	0.150	0.150
125	0.246	0.250	0.248
250	0.422	0.432	0.427
500	0.779	0.820	0.799
1,000	1.469	1.534	1.501
2,000	2.651	2.755	2.703

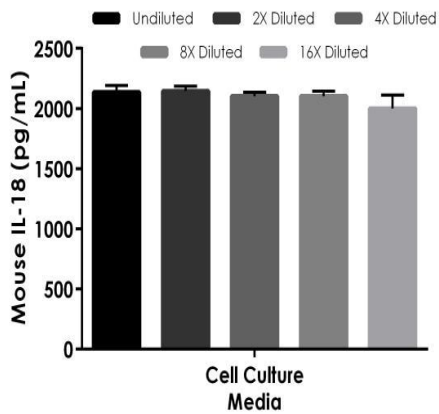
Example of mouse IL-18 standard curve in 1X Cell Extraction Buffer PTR.

The IL-18 standard curve was prepared as described. Raw data values are shown in the table. Background-subtracted data values (mean  $\pm$  SD) are graphed.



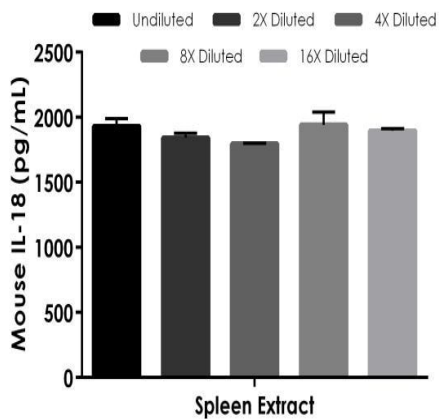
Interpolated concentrations of spike IL-18 in mouse serum and plasma samples.

The concentrations of IL-18 were measured in duplicates, interpolated from the IL-18 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  $\pm$  SD,  $n=2$ ).



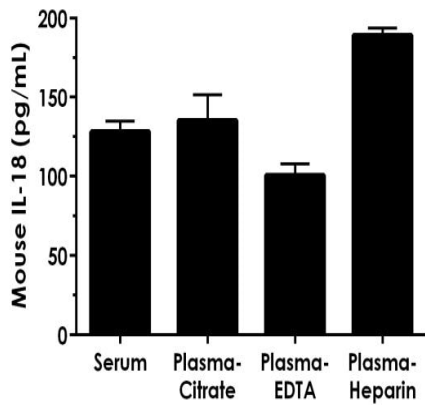
Interpolated concentrations of spike IL-18 in mouse cell culture media sample.

The concentrations of IL-18 were measured in duplicates, interpolated from the IL-18 standard curves and corrected for sample dilution. Undiluted samples are as follows: Cell culture supernatant 50%. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD,  $n=2$ ).



Interpolated concentrations of native IL-18 in mouse spleen extract sample based on a 100  $\mu$ g/mL extract load.

The concentrations of IL-18 were measured in duplicate and interpolated from the IL-18 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD,  $n=2$ ). The mean IL-18 concentration was determined to be 1882 pg/mL in spleen extract.



Interpolated concentrations of native IL-18 in mouse serum and plasma samples.

The concentrations of IL-18 were measured in duplicate and interpolated from the IL-18 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD, n=2). The mean IL-18 concentration was determined to be 128 pg/mL serum, 135pg/mL in plasma (citrate), 101pg/mL in plasma (EDTA), and 190pg/mL in plasma (heparin).

Dilution Factor	Interpolated value	50% Mouse Serum	50% Mouse Plasma (Citrate)	50% Mouse Plasma (EDTA)	50% Mouse Plasma (Heparin)	50% Media
Undiluted	pg/mL	946	859	940	989	1,068
	% Expected value	100	100	100	100	100
2	pg/mL	467	460	472	551	536
	% Expected value	99	107	101	112	100
4	pg/mL	214	231	244	271	263
	% Expected value	91	107	104	110	99
8	pg/mL	98.4	112	115	128	131
	% Expected value	83	105	98	104	98
16	pg/mL	49.4	58.4	54.1	62.9	62.5
	% Expected value	84	109	92	102	94

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.

Recombinant IL-18 was spiked into the following biological samples and diluted in a 2-fold dilution series in Sample Diluent NS.

Dilution Factor	Interpolated value	100 $\mu$ g/mL Spleen Extract
Undiluted	pg/mL	1932
	% Expected value	100
2	pg/mL	921
	% Expected value	95
4	pg/mL	449
	% Expected value	93
8	pg/mL	243
	% Expected value	101
16	pg/mL	119
	% Expected value	98

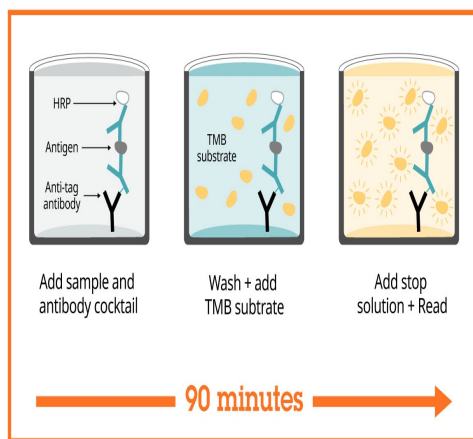
Linearity of dilution.

Native IL-18 was measured in the following biological samples in a 2-fold dilution series. Sample dilutions are made in 1X Cell Extraction Buffer PTR.

Sample Diluent Buffer	n=	Minimal Detectable Dose
Sample Diluent NS	16	13.2 pg/mL
1X Cell Extraction Buffer PTR	25	10.5 pg/mL

Assay sensitivity.

The MDD was determined by calculating the mean of zero standard replicates and adding 2 standard deviations then extrapolating the corresponding concentration.



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.

Sandwich ELISA - Mouse IL-18 ELISA Kit  
(ab216165)

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**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

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Now in 10-pack and 384-well formats

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

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