

Product datasheet

Human IL-18 ELISA Kit ab215539

Recombinant SimpleStep ELISA[®]

★★★★★ 1 Abreviews 4 References 13 Images

Overview

Product name Human IL-18 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
HeLa extract	5			2.7%

Inter-assay

Sample	n	Mean	SD	CV%
HeLa extract	3			14.2%

Sample type

Cell culture supernatant, Urine, Serum, Cell culture extracts, Tissue Extracts, Hep Plasma, EDTA Plasma, Cit plasma

Assay type

Sandwich (quantitative)

Sensitivity

8.3 pg/ml

Range

62.5 pg/ml - 4000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Urine	88	86% - 91%
Serum	84	80% - 91%
Cell culture extracts	96	93% - 101%
Cell culture media	96	89% - 104%
Hep Plasma	93	91% - 97%

Sample type	Average %	Range
EDTA Plasma	86	82% - 91%
Cit plasma	82	80% - 84%

Assay time

1h 30m

Assay duration

One step assay

Species reactivity

Reacts with: Human

Does not react with: Cow

Product overview

Human IL-18 ELISA Kit (ab215539) 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, tissue extracts, and urine. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human IL-18 with 8.3 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 human IL-18 protein in serum, plasma, and cell culture supernatant, cell and tissue extract samples only.

CROSS REACTIVITY Recombinant IL-18BP was prepared at 50 ng/mL and 8 ng/mL and assayed for cross reactivity. No cross-reactivity was observed.

INTERFERENCE Recombinant IL-18BP was prepared at 50 ng/mL and 8 ng/mL and tested for interference. No interference with was observed.

SPECIES REACTIVITY This kit recognizes human IL-18 protein.

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

Reactivity < 3% was determined for the following species: Mouse, rat and 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 human IL-18. Human IL-18 has 66% protein sequence identity to mouse Lipocalin-2.

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.

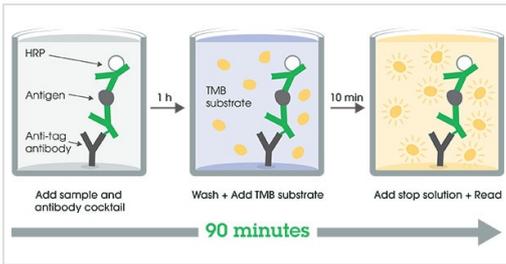
Components	1 x 96 tests
10X Human IL-18 Capture Antibody	1 x 600µl
10X Human IL-18 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent CPI - HAMA Blocker (ab193969)	1 x 6ml
Human 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.

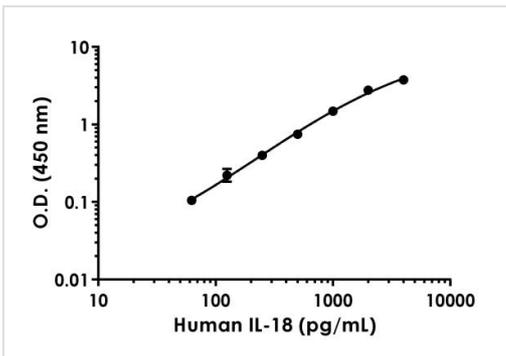
Cellular localization Secreted.

Images



Other - Human IL-18 ELISA Kit (ab215539)

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.



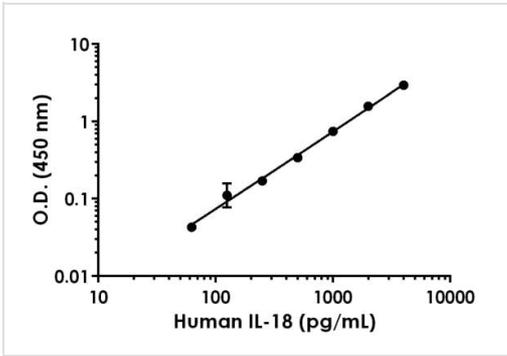
Example of human IL-18 standard curve in Sample Diluent NS.

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

Standard Curve Measurements			
Concentration (pg/mL)	O.D 450 nm		Mean O.D
	1	2	
0	0.060	0.060	0.060
62.5	0.172	0.157	0.165
125	0.312	0.252	0.282
250	0.467	0.452	0.459
500	0.789	0.822	0.806
1,000	1.514	1.565	1.540
2,000	2.750	2.904	2.827
4,000	3.795	3.809	3.802

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

Example of human 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.



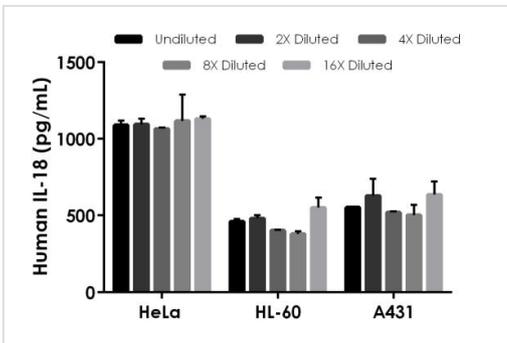
Example of human IL-18 standard curve in 1X Cell Extraction Buffer PTR.

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

Concentration (pg/ml)	O.D 450 nm		Mean O.D
	1	2	
0	0.054	0.053	0.053
62.5	0.095	0.098	0.096
125	0.196	0.139	0.168
250	0.230	0.217	0.224
500	0.391	0.400	0.395
1,000	0.784	0.817	0.800
2,000	1.612	1.662	1.636
4,000	2.984	3.001	2.992

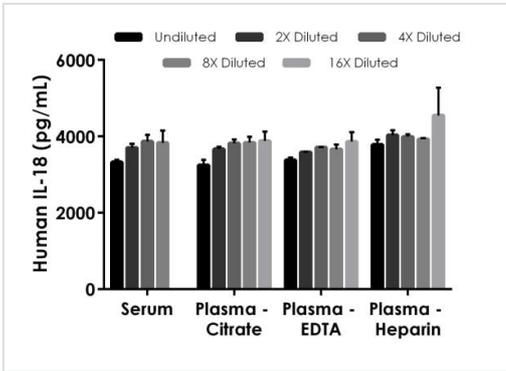
Example of human IL-18 standard curve in 1X Cell Extraction Buffer PTR.

Example of human 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 +/- SD) are graphed.



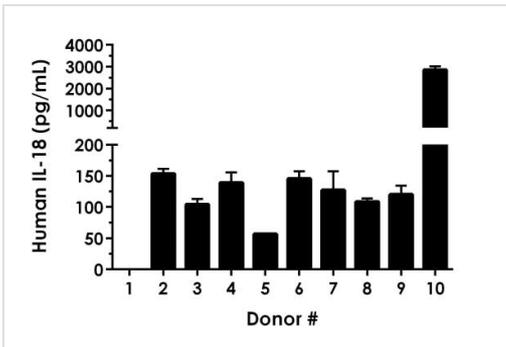
Interpolated concentrations of native IL-18 in human HeLa, HL-60, and A431 Cell Extract samples based on a 800 µg/ml extract load.

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 +/- SD, n=2). The mean IL-18 concentration was determined to be 1,099 pg/ml in HeLa cell extract, 456 pg/ml in HL-60 cell extract and 567 pg/ml in A431 cell extract.



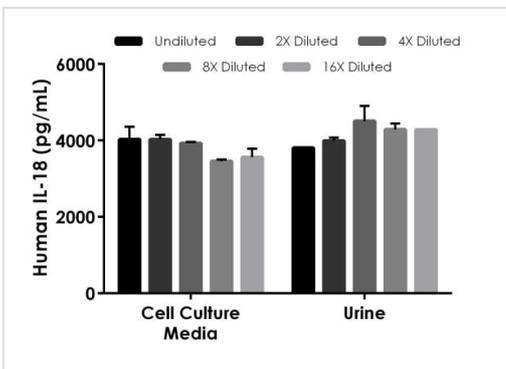
Interpolated concentrations of spike IL-18 in human serum and plasma samples.

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), and plasma (heparin) 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean IL-18 concentration was determined to be 3,681 pg/mL in serum, 3,692 pg/mL in plasma (citrate), 6,941 pg/mL in plasma (EDTA) and 4,057 pg/mL in plasma (heparin).



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

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean IL-18 concentration was determined to be 423 pg/mL with a range of undetectable – 2,852 pg/mL.



Interpolated concentrations of spike IL-18 in cell culture media and human urine 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: cell culture media 50% and urine 12.5%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean IL-18 concentration was determined to be 3,079 pg/mL in cell culture media and 4,119 pg/mL in urine.

Dilution Factor	Interpolated value	800 µg/mL HeLa Extract	800 µg/mL HL-60 Extract	800 µg/mL A431 Extract
Undiluted	pg/mL	1,089	461.1	551.9
	% Expected value	100	100	100
2	pg/mL	547.3	240.3	314.1
	% Expected value	101	104	114
4	pg/mL	266.4	100.5	129.9
	% Expected value	98	87	94
8	pg/mL	139.6	47.4	62.8
	% Expected value	103	82	91
16	pg/mL	70.6	34.4	39.7
	% Expected value	104	119	115

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 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.

Dilution Factor	Interpolated value	50% Human Serum	50% Human Plasma (Citrate)	50% Human Plasma (EDTA)	50% Human Plasma (Heparin)	50% PBMC Media	12.5% Human Urine
Undiluted	pg/mL	1,663	1,624	1,690	1,890	2,013	476
	% Expected value	100	100	100	100	100	100
2	pg/mL	925	917	897	1,009	1,007	250
	% Expected value	111	113	106	107	100	105
4	pg/mL	483	477	464	499	491	141
	% Expected value	116	118	110	106	98	118
8	pg/mL	240	240	229	246	216	67.0
	% Expected value	115	118	108	104	86	113
16	pg/mL	NL	121	121	142	111	33.5
	% Expected value		120	114	120	88	113

NL = Non-Linear

Linearity of dilution.

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

Sample Diluent Buffer	n=	Minimal Detectable Dose
Sample Diluent NS	33	8.3 pg/mL
1X Cell Extraction Buffer PTR	16	19.2 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.

Powered by
recombinant antibodies



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Sandwich ELISA - Human IL-18 ELISA Kit
(ab215539)

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

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors