

## Product datasheet

# Rat IL-17A ELISA Kit ab214028

SimpleStep ELISA<sup>®</sup>

★★★★★ 1 Abreviews 2 References 8 Images

### Overview

**Product name** Rat IL-17A ELISA Kit

**Detection method** Colorimetric

**Precision**

Intra-assay

Sample	n	Mean	SD	CV%
Overall	3			3%

Inter-assay

Sample	n	Mean	SD	CV%
Overall	5			7%

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

**Assay type** Sandwich (quantitative)

**Sensitivity** 1.1 pg/ml

**Range** 6.25 pg/ml - 400 pg/ml

**Recovery**

Sample specific recovery

Sample type	Average %	Range
Serum	113	105% - 117%
Cell culture media	101	96% - 110%
Cit plasma	110	108% - 112%

**Assay time** 1h 30m

**Assay duration** One step assay

**Species reactivity** **Reacts with:** Rat

**Product overview** IL-17A *in vitro* SimpleStep ELISA<sup>®</sup> (Enzyme-Linked Immunosorbent Assay) kit is designed for the

quantitative measurement of IL-17A protein in rat serum, plasma, and cell culture supernatant samples.

The SimpleStep ELISA® employs an affinity tag labeled capture antibody and a reporter conjugated detector antibody which immunocapture the sample analyte in solution. This entire complex (capture antibody/analyte/detector antibody) is in turn immobilized via immunoaffinity of an anti-tag antibody coating the well. To perform the assay, samples or standards are added to the wells, followed by the antibody mix. 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 Sample Diluent NS: 1.1 pg/mL

Samples in Sample Diluent 75BS: 3.2 pg/mL

**Notes** IL-17A is a pro-inflammatory cytokine that is secreted by a subset of activated T cells. It is a disulfide-linked homodimer with both glycosylated and non-glycosylated forms. IL-17A induces stromal cells to produce pro-inflammatory and hematopoietic cytokines, and also enhances the surface expression of ICAM1/intracellular adhesion molecule 1 in fibroblasts.

**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 Rat IL-17a Capture Antibody	1 x 600µl
10X Rat IL-17a Detector Antibody	1 x 600µl
10X Wash Buffer PT ( <a href="#">ab206977</a> )	1 x 20ml
Antibody Diluent 5BR	1 x 6ml
Plate Seals	1 unit
SimpleStep Pre-Coated 96-Well Microplate ( <a href="#">ab206978</a> )	1 unit
Rat IL-17a Lyophilized Recombinant Protein	2 vials
Sample Diluent 75BS	1 x 20ml
Sample Diluent NS ( <a href="#">ab193972</a> )	1 x 50ml
Stop Solution	1 x 12ml

<b>Components</b>	<b>1 x 96 tests</b>
TMB Development Solution	1 x 12ml

<b>Function</b>	Induces stromal cells to produce proinflammatory and hematopoietic cytokines. Enhances the surface expression of the intracellular adhesion molecule-1 (ICAM-1) in fibroblasts.
<b>Tissue specificity</b>	Restricted to activated memory T-cells.
<b>Sequence similarities</b>	Belongs to the IL-17 family.
<b>Post-translational modifications</b>	Found both in glycosylated and nonglycosylated forms.
<b>Cellular localization</b>	Secreted.

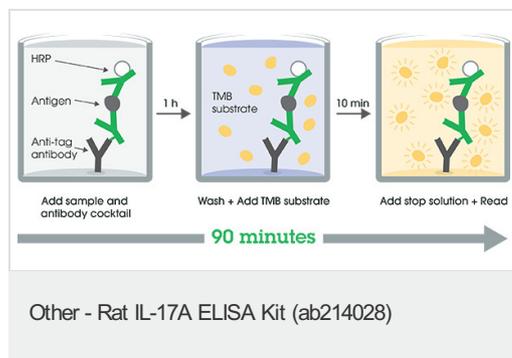
### Applications

Our [Abpromise guarantee](#) covers the use of **ab214028** in the following tested applications.

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

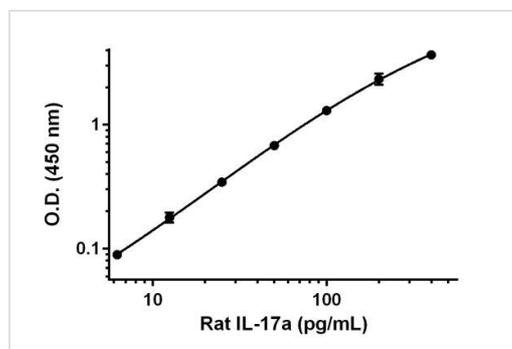
Application	Abreviews	Notes
Sandwich ELISA		Use at an assay dependent concentration.

### Images



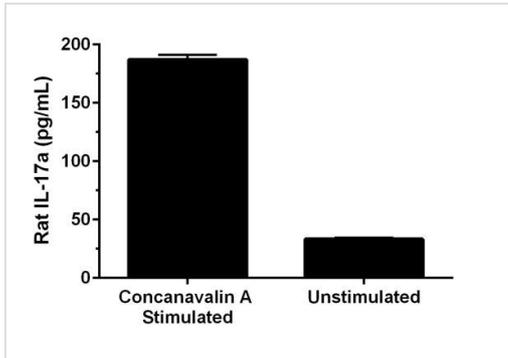
SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.

Other - Rat IL-17A ELISA Kit (ab214028)



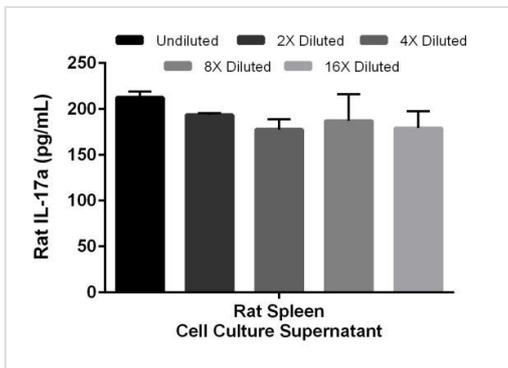
Background-subtracted data values (mean +/- SD) are graphed.

Example of rat IL-17a standard curve in Sample Diluent NS.



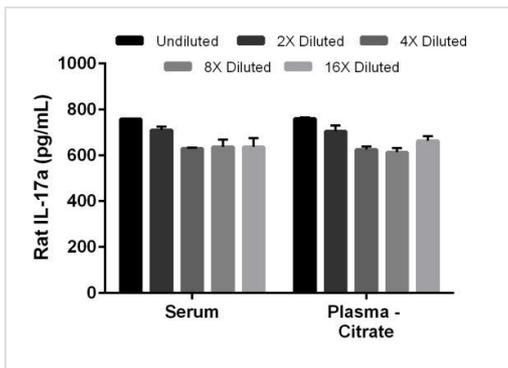
Comparison of IL-17a in unstimulated and Concanavalin A stimulated rat spleen cell supernatants.

Rat spleen cells were cultured in the absence or presence of 5  $\mu\text{g/mL}$  Concanavalin A for 48 hours. The concentrations of IL-17a were measured in neat supernatant samples in duplicates and interpolated from the IL-17a standard curve. The interpolated values are plotted (mean  $\pm$  SD, n=2). The mean IL-17a concentration was determined to be 33.2 pg/mL in unstimulated, 187 pg/mL in Concanavalin A stimulated supernatants and undetectable in media (not shown).



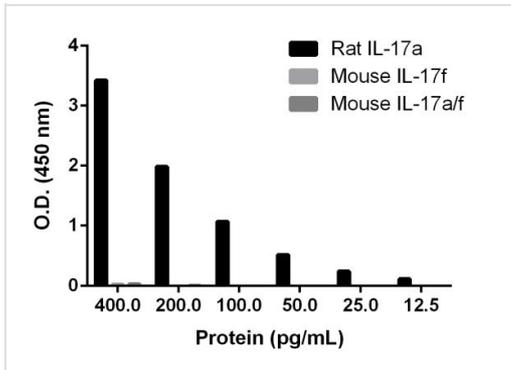
Interpolated concentrations of native IL-17a in 2 days 5  $\mu\text{g/mL}$  Concanavalin A treated rat spleen cell culture supernatant samples.

The concentrations of IL-17a were measured in duplicates, interpolated from the IL-17a standard curves and corrected for sample dilution. Undiluted samples are as follows: rat spleen cell culture supernatant 100%. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD, n=2). The mean IL-17a concentration was determined to be 190 pg/mL in Concanavalin A treated rat spleen cell culture supernatant.



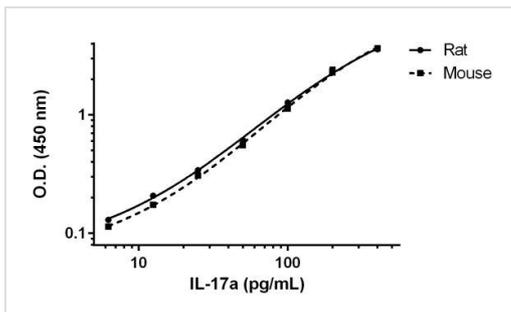
Interpolated concentrations of spike IL-17a in rat serum and plasma (citrate) samples.

The concentrations of IL-17a were measured in duplicates, interpolated from the IL-17a standard curves and corrected for sample dilution. Undiluted samples are as follows: rat serum and plasma (citrate) 100%. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD, n=2).



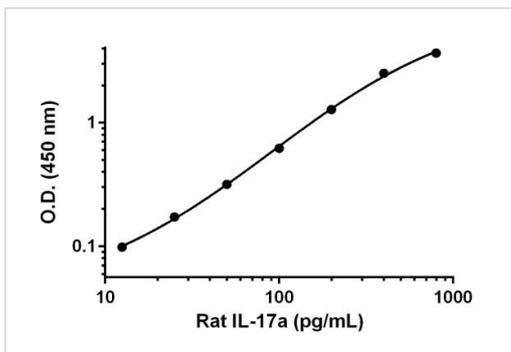
Serial dilutions of recombinant rat IL-17a homodimer, recombinant mouse IL-17f homodimer and recombinant mouse IL-17a/f heterodimer were measured with this kit.

Background-subtracted data values (n = 1) are graphed. Note that this kit is specific for IL-17a homodimer, it does not recognize IL-17f homodimer or IL-17a/f heterodimer.



Titration of mouse, rat and human recombinant IL-17a within the working range of the assay.

Two fold serial dilutions of rat, mouse and human recombinant IL-17a proteins were measured with this kit. Background-subtracted data values (mean +/- SD, n = 2) are graphed. O.D. values for human IL-17a protein were below background values. Note this kit reacts with mouse recombinant IL-17a protein. Note this kit does not react with human recombinant IL-17a protein.



Example of rat IL-17a standard curve in Sample Diluent 75BS.

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

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

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