

## Product datasheet

# Human IL-13 ELISA Kit ab178014

SimpleStep ELISA<sup>®</sup>

[2 References](#) [4 Images](#)

### Overview

**Product name** Human IL-13 ELISA Kit

**Detection method** Colorimetric

**Precision**

Intra-assay

Sample	n	Mean	SD	CV%
overall	4			3.3%

Inter-assay

Sample	n	Mean	SD	CV%
overall	3			2.5%

**Sample type** Cell culture supernatant, Serum, Plasma

**Assay type** Sandwich (quantitative)

**Sensitivity** 39 pg/ml

**Range** 78 pg/ml - 5000 pg/ml

**Recovery**

Sample specific recovery

Sample type	Average %	Range
Serum	67	65% - 69%
Cell culture media	86	82% - 91%
Citrate Plasma	59	57% - 61%

**Assay time** 1h 30m

**Assay duration** One step assay

**Species reactivity** **Reacts with:** Human

**Product overview** IL-13 (Interleukin-13) *in vitro* SimpleStep ELISA™ (Enzyme-Linked Immunosorbent Assay) kit is

designed for the quantitative measurement of IL-13 protein in human cell culture supernatant and Human serum and plasma 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.

**Notes** Interleukin-13 (IL-13) is a secreted immunoregulatory cytokine in the IL-4/IL-13 family that is linked to allergic reactions and cancer pathogenesis. IL-13 inhibits inflammatory cytokine production and promotes immunoglobulin class switching on B-cells. IL-13 synergizes with IL2 in regulating interferon-gamma synthesis. IL-13 is linked to allergic rhinitis, a common disease of complex inheritance characterized by mucosal inflammation caused by allergen exposure.

**Tested applications** **Suitable for:** Sandwich ELISA

**Platform** Microplate

### Properties

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

Components	1 x 96 tests
10X Human IL-13 Capture Antibody	1 x 600µl
10X Human IL-13 Detector Antibody	1 x 600µl
10X Wash Buffer PT ( <a href="#">ab206977</a> )	1 x 20ml
Antibody Diluent CPI - HAMA Blocker ( <a href="#">ab193969</a> )	1 x 6ml
Human IL-13 Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS ( <a href="#">ab193972</a> )	1 x 12ml
SimpleStep Pre-Coated 96-Well Microplate ( <a href="#">ab206978</a> )	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

**Function** Cytokine (PubMed:8096327, PubMed:8097324). Inhibits inflammatory cytokine production (PubMed:8096327). Synergizes with IL2 in regulating interferon-gamma synthesis (PubMed:8096327). May be critical in regulating inflammatory and immune responses (PubMed:8096327, PubMed:8097324). Positively regulates IL31RA expression in macrophages.

<b>Involvement in disease</b>	Allergic rhinitis
<b>Sequence similarities</b>	Belongs to the IL-4/IL-13 family.
<b>Cellular localization</b>	Secreted.

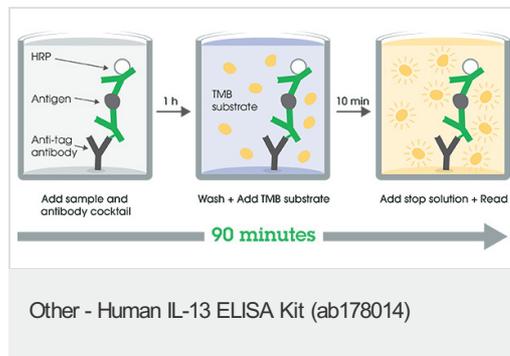
## Applications

Our [Abpromise guarantee](#) covers the use of **ab178014** in the following tested applications.

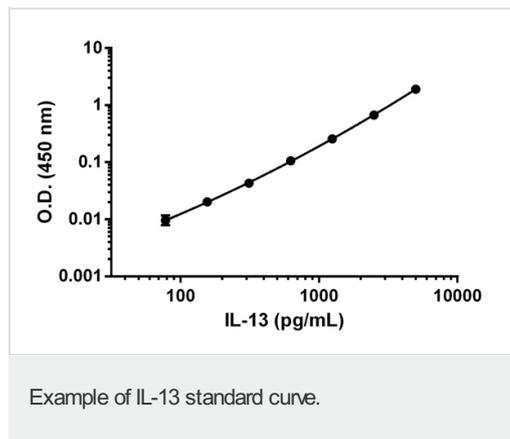
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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

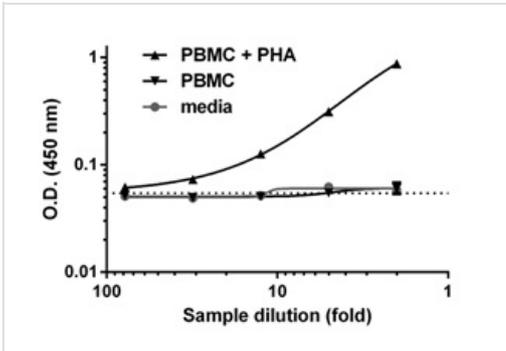
## Images



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.

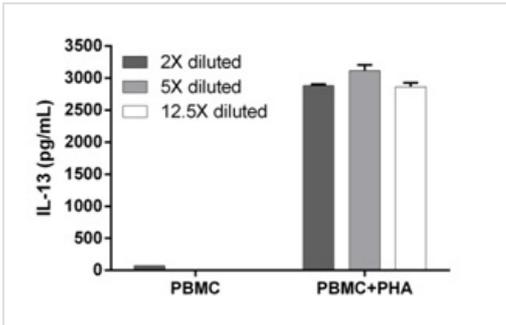


Background-subtracted data values (mean +/- SD) are graphed.



Example of PBMC cell culture supernatant titration.

PBMC were grown in the absence or presence of phytohemagglutinin (PHA) for 2 days. IL-13 was measured in undiluted, 2-fold, 4-fold and 8-fold diluted cell culture supernatants of the PHA stimulated PBMC, unstimulated PBMC and media. Raw data values (mean +/-SD, n=2) are graphed. The dotted line represents zero sample background.



Interpolated concentrations of secreted IL-13 in unstimulated and PHA-stimulated Human PBMC.

The concentrations of IL-13 were interpolated from data values shown in Figure 2 using IL-13 standard curve and corrected for sample dilution. The mean IL-13 concentration was determined to be 2,954 pg/mL in stimulated PBMC supernatants and 73 pg/mL in unstimulated PBMC.

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