

Product datasheet

Human IL-23 ELISA Kit ab221837

Recombinant SimpleStep ELISA[®]

[2 References](#) [5 Images](#)

Overview

Product name Human IL-23 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

| Sample | n | Mean | SD | CV% |
|--------|---|------|----|-----|
| Serum | 5 | | | 4% |

Inter-assay

| Sample | n | Mean | SD | CV% |
|--------|---|------|----|------|
| Serum | 3 | | | 2.7% |

Sample type

Serum, Cell culture media, Hep Plasma, EDTA Plasma, Cit plasma

Assay type

Sandwich (quantitative)

Sensitivity

15.6 pg/ml

Range

39.1 pg/ml - 2500 pg/ml

Recovery

Sample specific recovery

| Sample type | Average % | Range |
|--------------------|-----------|-------------|
| Serum | 113 | 108% - 120% |
| Cell culture media | 118 | 114% - 124% |
| Hep Plasma | 83 | 80% - 86% |
| EDTA Plasma | 113 | 110% - 116% |
| Cit plasma | 107 | 103% - 110% |

Assay time

1h 30m

Assay duration

One step assay

Species reactivity**Reacts with:** Human**Product overview**

Human IL-23 ELISA Kit (ab221837) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of IL-23 protein in cell culture media, cit plasma, edta plasma, hep plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human IL-23 with 15.6 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.

Notes

IL-23 acts as a growth factor for activated T and NK cells. IL-23 induces auto immune inflammation and may be responsible for auto immune inflammatory diseases. IL-23 is a complexed heterodimer of the IL-23A (19 subunit) and IL-12B (p40 subunit). The ab221837 pair recognize the heterodimer by using antibodies to both the p19 and p40 subunits.

The standard is affinity purified.

Platform

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-23 Capture Antibody | 1 x 600µl |
| 10X Human IL-23 Detector Antibody | 1 x 600µl |
| 10X Wash Buffer PT (ab206977) | 1 x 20ml |
| Antibody Diluent 4BI | 1 x 6ml |
| Human IL-23 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 |

| Components | 1 x 96 tests |
|--------------------------|--------------|
| Stop Solution | 1 x 12ml |
| TMB Development Solution | 1 x 12ml |

Function

Associates with IL12B to form the IL-23 interleukin, an heterodimeric cytokine which functions in innate and adaptive immunity. IL-23 may constitute with IL-17 an acute response to infection in peripheral tissues. IL-23 binds to an heterodimeric receptor complex composed of IL12RB1 and IL23R, activates the Jak-Stat signaling cascade, stimulates memory rather than naive T-cells and promotes production of proinflammatory cytokines. IL-23 induces autoimmune inflammation and thus may be responsible for autoimmune inflammatory diseases and may be important for tumorigenesis.

Tissue specificity

Secreted by activated dendritic and phagocytic cells and keratinocytes. Also expressed by dermal Langerhans cells (at protein level).

Sequence similarities

Belongs to the IL-6 superfamily.

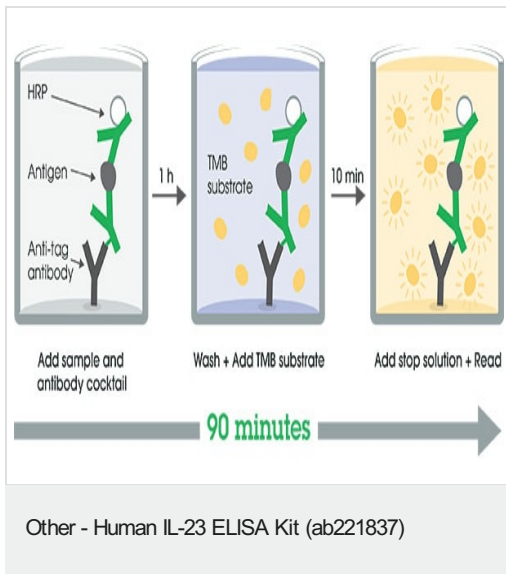
Developmental stage

Expressed by newborns dendritic cells.

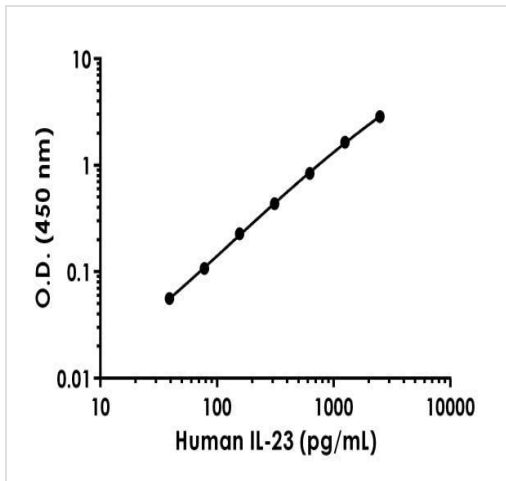
Cellular localization

Secreted. Secreted upon association with IL12B.

Images

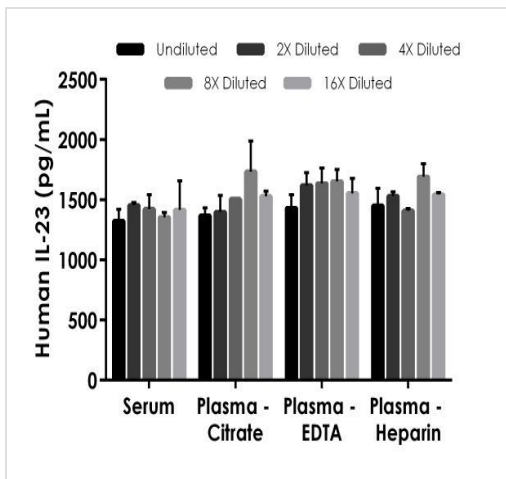


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



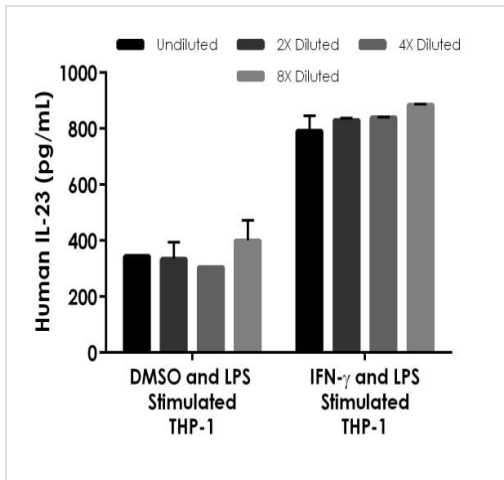
Example of human IL-23 standard curve

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



Interpolated concentrations of spiked IL-23 in human serum and plasma samples

The concentrations of IL-23 were measured in duplicates, interpolated from the IL-23 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 +/- SD, n=2).



Interpolated concentrations of native IL-23 in human cell culture supernatant samples

The concentrations of IL-23 were measured in duplicates, interpolated from the IL-23 standard curves and corrected for sample dilution. Undiluted samples are as follows: DMSO and LPS stimulated THP-1 cell culture supernatant 100% and IFN- γ and LPS stimulated THP-1 cell culture supernatant 25%. The interpolated dilution factor corrected values are plotted (mean \pm SD, n=2). The mean IL-23 concentration was determined to be 346 pg/mL in DMSO and LPS stimulated THP-1 cell culture supernatant and 834 pg/mL in IFN- γ and LPS stimulated THP-1 cell culture supernatant. Media and unstimulated THP-1 cell culture supernatant were undetectable.

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-23 ELISA Kit
(ab221837)

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

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