

Product datasheet

Human IL-3 ELISA Kit ab215088

Recombinant SimpleStep ELISA

[7 Images](#)

Overview

Product name Human IL-3 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Serum	5			5.7%

Inter-assay

Sample	n	Mean	SD	CV%
Serum	3			4.9%

Sample type

Cell culture supernatant, Urine, Serum, Plasma, Hep Plasma, EDTA Plasma, Cit plasma

Assay type

Sandwich (quantitative)

Sensitivity

6.7 pg/ml

Range

15 pg/ml - 1000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	102	99% - 105%
Urine	91	88% - 92%
Serum	88	84% - 91%
Cell culture media	99	94% - 103%
Hep Plasma	86	81% - 92%
EDTA Plasma	89	87% - 89%

Sample type	Average %	Range
Cit plasma	85	84% - 87%

Assay time

1h 30m

Assay duration

One step assay

Species reactivity

Reacts with: Human

Product overview

Human IL-3 ELISA Kit (ab215088) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of IL-3 protein in cit plasma, edta plasma, hep plasma, plasma, serum, urine, and cell culture supernatant. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human IL-3 with 6.7 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

Interleukin 3 (IL-3) is a secreted 133 amino acids long, glycosylated interleukin coded by the IL-3 gene. Previous names reported for IL-3 are Hematopoietic growth factor, Mast cell growth factor, multipotential colony-stimulating factor, and P-cell-stimulating factor. IL-3 has been found to stimulate a variety of cell activities such as; proliferation, differentiation, survival of pluripotent hematopoietic stem cells, and may be associated with neurologic disorders. IL-3 is expressed by activated T-cells, mast cells, and natural killer cells. IL-3 performs its biological action by binding to a transmembrane receptor complex consisting of IL-3RA, also known as CD123, and a signal inducing beta subunit, which also acts as a receptor for colony stimulating factor 2 and Interleukin 5.

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 Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent CPI - HAMA Blocker (ab193969)	1 x 6ml

Components	1 x 96 tests
10X Human IL-3 Capture Antibody	1 x 600µl
10X Human IL-3 Detector Antibody	1 x 600µl
Human IL-3 Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Sample Diluent NS (ab193972)	1 x 50ml
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

Function

Granulocyte/macrophage colony-stimulating factors are cytokines that act in hematopoiesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages.

This CSF induces granulocytes, macrophages, mast cells, stem cells, erythroid cells, eosinophils and megakaryocytes.

Tissue specificity

Activated T-cells, mast cells, natural killer cells.

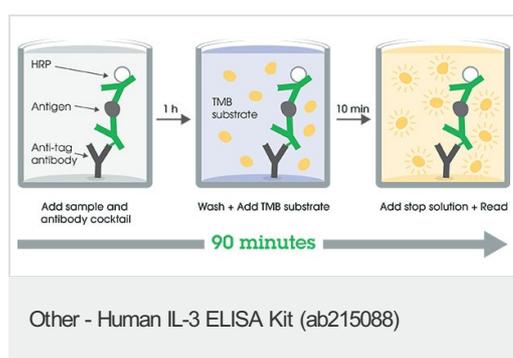
Sequence similarities

Belongs to the IL-3 family.

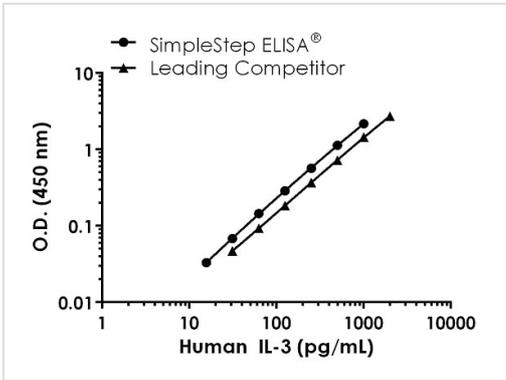
Cellular localization

Secreted.

Images

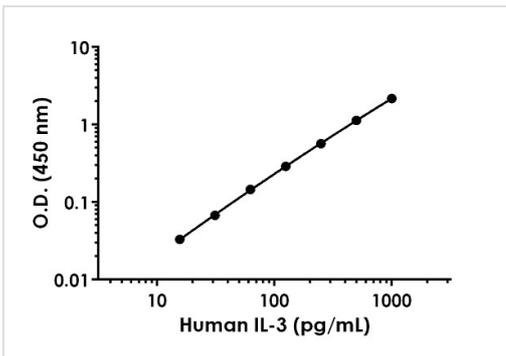


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



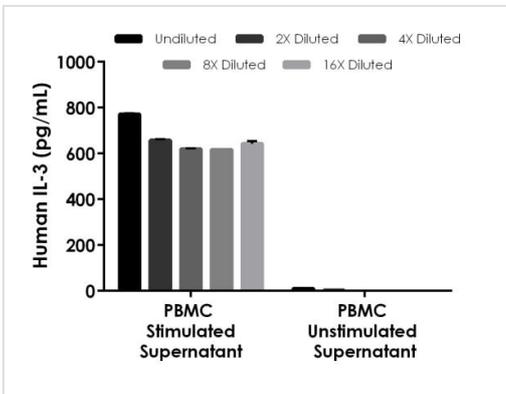
Human IL-3 standard curve comparison data.

Standard curve comparison between human IL-3 SimpleStep ELISA[®] kit and traditional ELISA kit from leading competitor. SimpleStep ELISA kit shows comparable sensitivity with shorter protocol time.



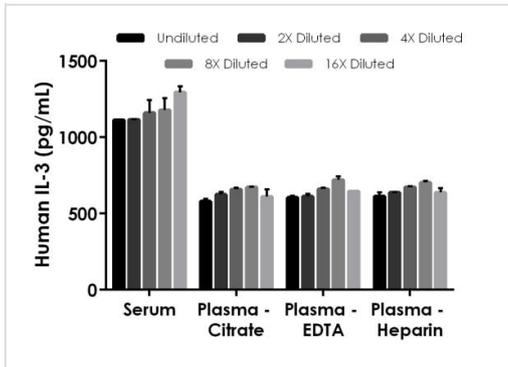
Example of human IL-3 standard curve in Sample Diluent NS.

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



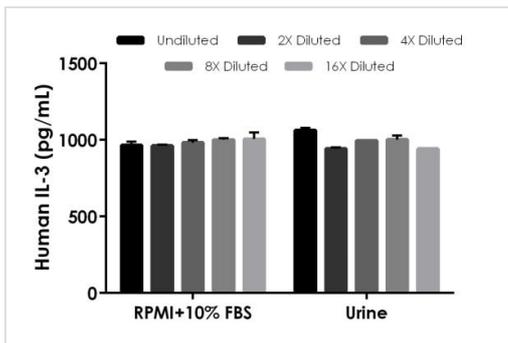
Interpolated concentrations of native IL-3 in human PBMC cell culture supernatant samples.

Human PBMCs were cultured in RPMI supplemented with 10% fetal calf serum, 2mM L-glutamine, 100 U/mL penicillin and 100 µg/mL streptomycin. Cells were cultured for 2 days at 37°C in the presence or absence of PHAM. The concentrations of IL-3 were measured in duplicates, interpolated from the IL-3 standard curves and corrected for sample dilution. Undiluted samples are as follows: stimulated supernatant 100% and unstimulated supernatant 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean (IL-3 concentration was determined to be 662 pg/mL in 100% stimulated supernatant, and 9.5 pg/mL in 100% unstimulated supernatant.



Interpolated concentrations of spike IL-3 in human serum and plasmas.

The concentrations of IL-3 were measured in duplicate and interpolated from the IL-3 standard curve and corrected for sample dilution. Undiluted samples are as follows: serum 100%, plasma (citrate) 50%, plasma (EDTA) 50%, plasma (Heparin) 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).



Interpolated concentrations of spike IL-3 in RPMI media and human urine.

The concentrations of IL-3 were measured in duplicate and interpolated from the IL-3 standard curve and corrected for sample dilution. Undiluted samples are as follows: RPMI+10% FBS 50%, urine 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).

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recombinant antibodies



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Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Sandwich ELISA - Human IL-3 ELISA Kit (ab215088)

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

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