

Product datasheet

Human IL-4 ELISA Kit High Sensitivity ab46063

3 Images

Overview

Product name Human IL-4 ELISA Kit High Sensitivity

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
A	8	7.43pg/ml	0.9	12.3%
B	8	6.2pg/ml	0.7	10.8%
C	8	8.77pg/ml	0.7	7.6%
D	8	7.36pg/ml	0.4	6%

Inter-assay

Sample	n	Mean	SD	CV%
A	9	7.1pg/ml	0.83	11.8%
B	9	6.47pg/ml	0.72	11.1%
C	9	8.76pg/ml	1.37	15.7%
D	9	7.44pg/ml	1.2	16.1%
E	7	2pg/ml	0.874	17%

Sample type Cell culture supernatant, Serum, Plasma

Assay type Sandwich (quantitative)

Sensitivity = 0.31 pg/ml

Range 0.31 pg/ml - 10 pg/ml

Recovery 101 %

Sample type	Average %	Range
Cell culture supernatant	95	97% - 127%
Serum	69	61% - 75%

Assay time

4h 00m

Assay duration

Multiple steps standard assay

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

Abcam's IL-4 Human High Sensitivity *in vitro* ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of IL-4 in Human serum, plasma, buffered solution and cell culture media.

A monoclonal antibody specific for IL-4 has been coated onto the wells of the microtiter strips provided. Samples, including standards of known IL-4 concentrations, control specimens or unknowns are pipetted into these wells. During the first incubation, the standards or samples and a biotinylated monoclonal antibody specific for IL-4 are simultaneously incubated. After washing, the enzyme Streptavidin-HRP, that binds the biotinylated antibody is added, incubated and washed. A TMB substrate solution is added which acts on the bound enzyme to induce a colored reaction product. The intensity of this colored product is directly proportional to the concentration of IL-4 present in the samples.

This kit will recognize both endogenous and recombinant Human IL-4.

Platform

Microplate

Properties**Storage instructions**

Store at +4°C. Please refer to protocols.

Components	Identifier	1 x 96 tests
10X Standard Diluent Buffer	Black	1 x 25ml
200X Wash Buffer	White	1 x 10ml
Amplification Diluent	Brown & blue spot	1 x 25ml
Amplifier	Yellow	1 x 200µl
Biotinylated anti IL-4		1 x 400µl
Biotinylated Antibody Diluent	Red	1 x 7.5ml
Chromogen TMB Substrate Solution		1 x 11ml
HRP Diluent	Red	1 x 25ml

Components	Identifier	1 x 96 tests
IL-4 Microplate (12 x 8 well strips)		1 unit
IL-4 Standard (Lyophilized)		2 vials
Stop Reagent	Black	1 x 11ml
Streptavidin-HRP		2 x 5µl

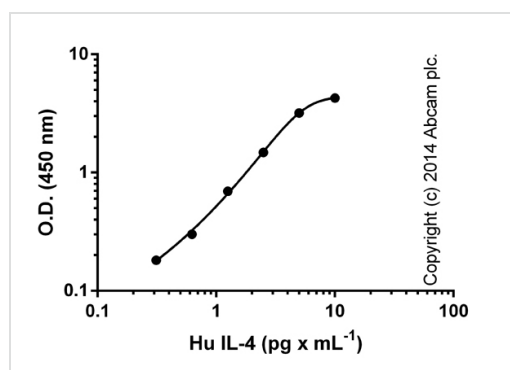
Relevance

IL-4 is a pleiotropic cytokine produced by activated T cells. It is a ligand for interleukin 4 receptor. The interleukin 4 receptor also binds to IL13, which may contribute to many overlapping functions of this cytokine and IL13. STAT6, a signal transducer and activator of transcription, has been shown to play a central role in mediating the immune regulatory signal of IL-4. IL-4, IL3, IL5, IL13, and CSF2 form a cytokine gene cluster on chromosome 5q, with this gene particularly close to IL13. IL-4, IL13 and IL5 are found to be regulated coordinately by several long-range regulatory elements in an over 120 kilobase range on the chromosome. Two alternatively spliced transcript variants of IL-4 encoding distinct isoforms have been reported.

Cellular localization

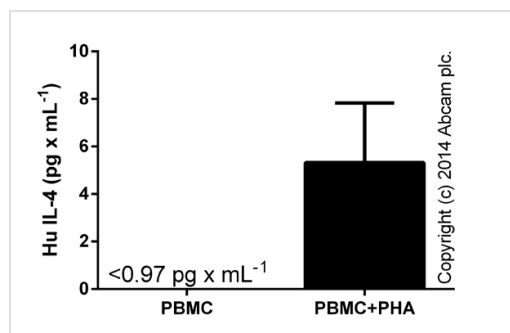
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Images



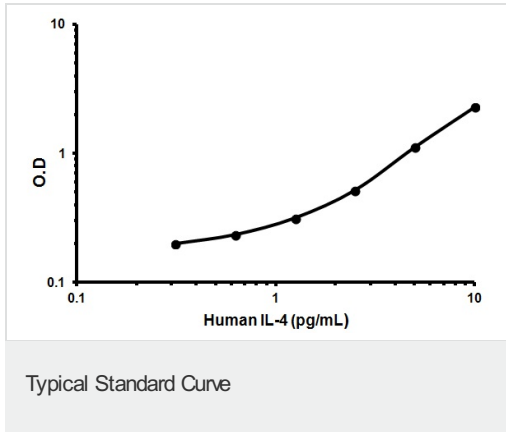
Standard curve of human IL-4, with background signal subtracted (duplicates; +/- SD).

ELISA: IL-4 High Sensitivity Human ELISA Kit
(ab46063)



IL-4 measured in cell culture supernatants from control (PBMC) or treated (PBMC+PHA; 2% PHA-M; LifeTechnologies) cells, grown for 48 hours (duplicates +/- SD). Samples tested neat - 1/10, control supernatant gave signals below level of detection.

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Representative Standard Curve using ab46063

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