



Product datasheet

Rat IL-2 ELISA Kit ab221834

重组 SimpleStep ELISA

3 References 7 图像

概述

产品名称 大鼠IL-2 ELISA试剂盒

检测方法 Colorimetric

批次内				
样品	n	Mean	SD	CV%
Serum	3			4%

批次间				
样品	n	Mean	SD	CV%
Serum	5			4.2%

样品类型 Serum, Cell culture media, Cit plasma

检测类型 Sandwich (quantitative)

灵敏度 4.9 pg/ml

范围 31.25 pg/ml - 2000 pg/ml

特定样本回收率		
样品类型	平均%	范围
Serum	93	89% - 100%
Tissue Extracts	45	43% - 48%
Cell culture media	108	99% - 113%
Cit plasma	86	84% - 88%

检测时间 1h 30m

实验步骤 One step assay

种属反应性 与反应: Rat

产品概述

Rat IL-2 ELISA Kit (ab221834) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of IL-2 protein in serum, cell culture media, and cit plasma. It uses our proprietary SimpleStep ELISA® technology. Quantitate Rat IL-2 with 4.9 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.

说明

IL-2, also known as T cell growth factor (TCGF), is a glycosylated alpha-helical monomeric polypeptide. It is secreted by activated CD4+ and CD8+ T cells, neurons, microglia and hematopoietic stem cells in response to antigenic or mitogenic stimulation. IL-2 is required for T-cell proliferation, natural killer cell (NK) cytolytic activity, differentiation of regulatory T cells, modulation of T helper (Th) cell differentiation and activation-induced cell death. In particular, IL-2 modulates the expression of receptors for other cytokines and transcription factors, thereby regulating cytokine cascades that correlate with each of the Th differentiation states. Complete deficiency of IL-2 has been implicated in severe combined immunodeficiency, whereas reduction of IL-2 correlates with reduced function of CD4+CD25+ regulatory T cells and destabilization of immune homeostasis leading to autoimmune disease. Increased expression of IL-2 has also been implicated in inflammatory conditions such as inflammatory bowel disease and chronic liver diseases.

平台

Microplate (12 x 8 well strips)

性能

存放说明

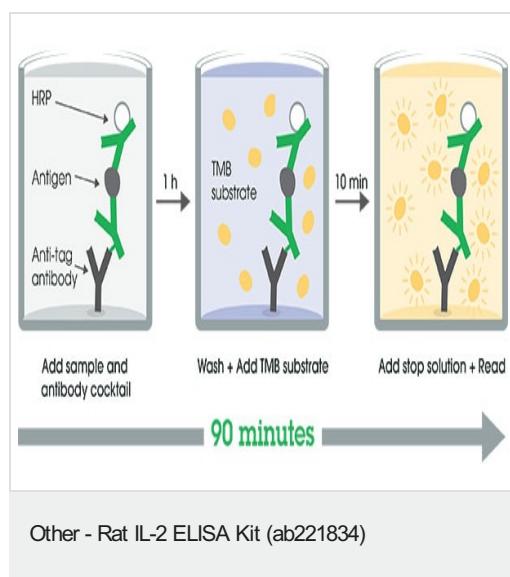
Store at +4°C. Please refer to protocols.

组 件	1 x 96 tests
10X Rat IL-2 Capture Antibody	1 x 600µl
10X Rat IL-2 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 4BI	1 x 6ml
Plate Seals	1 unit
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit

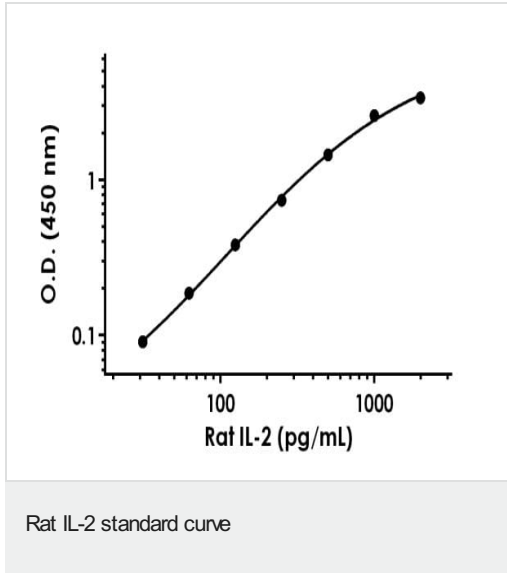
组件	1 x 96 tests
Rat IL-2 Lyophilized Recombinant Protein	2 vials
Sample Diluent 75BS	1 x 20ml
Sample Diluent NS (ab193972)	1 x 50ml
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

功能	Produced by T-cells in response to antigenic or mitogenic stimulation, this protein is required for T-cell proliferation and other activities crucial to regulation of the immune response. Can stimulate B-cells, monocytes, lymphokine-activated killer cells, natural killer cells, and glioma cells.
疾病相关	Note=A chromosomal aberration involving IL2 is found in a form of T-cell acute lymphoblastic leukemia (T-ALL). Translocation t(4;16)(q26;p13) with involves TNFRSF17.
序列相似性	Belongs to the IL-2 family.
细胞定位	Secreted.

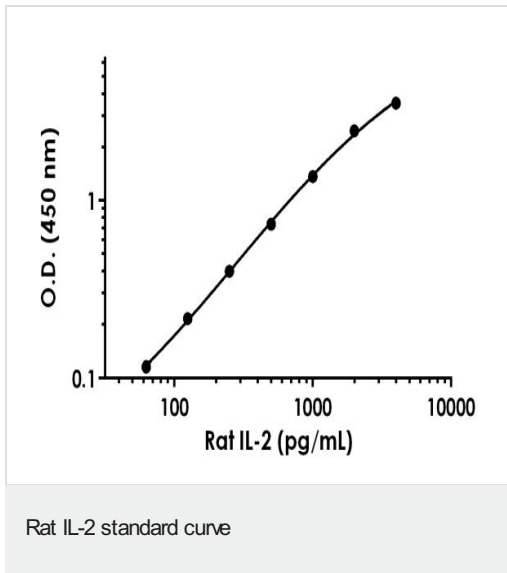
图片



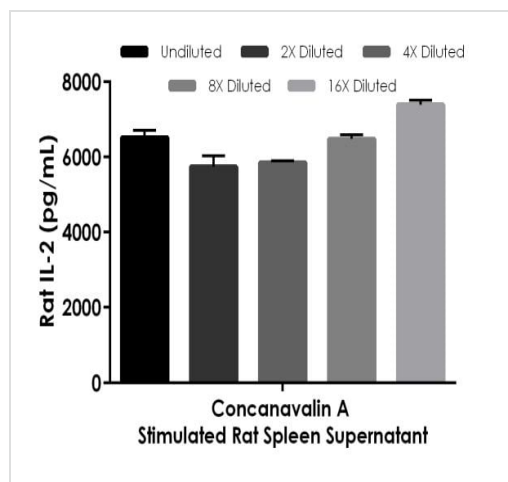
SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



Example of rat IL-2 standard curve in Sample Diluent NS.
Background-subtracted data values (mean \pm SD) are graphed.

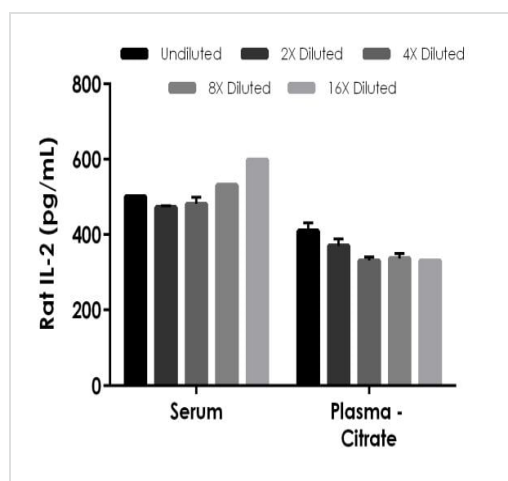


Example of rat IL-2 standard curve in Sample Diluent 60BS.
Background-subtracted data values (mean \pm SD) are graphed.



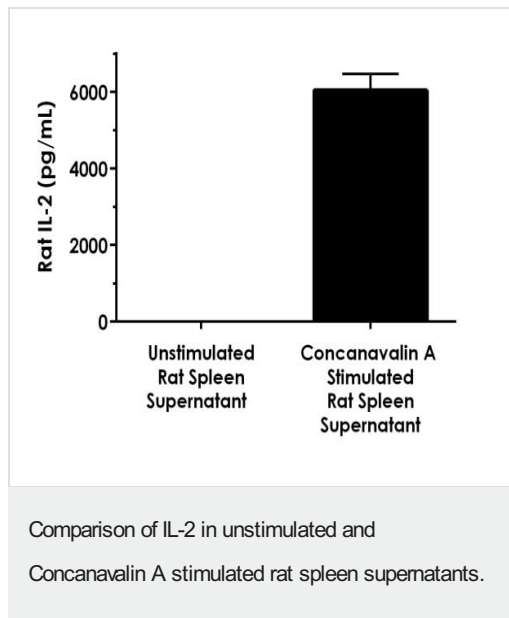
Interpolated concentrations of native IL-2 in Concanavalin A treated rat spleen (2 days) supernatant samples.

Interpolated concentrations of native IL-2 in Concanavalin A treated rat spleen (2 days) supernatant samples. The concentrations of IL-2 were measured in duplicates, interpolated from the IL-2 standard curves and corrected for sample dilution. Undiluted samples are as follows: spleen supernatant 25%. The interpolated dilution factor corrected values are plotted (mean \pm SD, $n=2$). The mean IL-2 concentration was determined to be 6401 pg/mL in Concanavalin A treated rat spleen supernatant.



Interpolated concentrations of spiked IL-2 in rat serum and plasma samples.

Interpolated concentrations of spiked IL-2 in rat serum and plasma samples. The concentrations of IL-2 were measured in duplicates, interpolated from the IL-2 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 50%, plasma (citrate) 50%. The interpolated dilution factor corrected values are plotted (mean \pm SD, $n=2$).



Comparison of IL-2 in unstimulated and Concanavalin A stimulated rat spleen supernatants. Rat spleen was cultured for 2 days in the presence or absence of 5 µg/mL Concanavalin A. The concentrations of IL-2 were measured in three different dilutions of the supernatant samples in duplicates and interpolated from the IL-2 standard curve. The interpolated values are plotted (mean \pm SD, n=3). The mean IL-2 concentration was determined to be 6042 pg/mL in Concanavalin A stimulated neat rat spleen supernatant and undetectable in unstimulated rat spleen supernatant and RPMI media (not shown).

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Success from the first experiment
Confirmed specificity

Ethical standards compliant
Animal-free production

Sandwich ELISA - Rat IL-2 ELISA Kit (ab221834)

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

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