

Rat IL-1 beta ELISA Kit ab255730

リコンビナント SimpleStep ELISA

33 References 画像数 5

製品の概要

製品名	Rat IL-1 beta ELISA Kit				
検出方法	Colorimetric				
再現性	Intra-Assay (同時再現性)				
	サンプル	N	平均値	SD	CV%
	Serum	8			3.9%
	Inter-Assay (日差再現性)				
	サンプル	N	平均値	SD	CV%
	Serum	3			4.3%
サンプルの種類	Serum, Cell culture media, EDTA Plasma, Cit plasma				
アッセイタイプ	Sandwich (quantitative)				
検出感度	26.58 pg/ml				
検出範囲	54.69 pg/ml - 3500 pg/ml				
添加回収試験	特定サンプルでの回収試験				
	サンプルの種類	平均 %		測定範囲	
	Serum	90		82% - 94%	
	Cell culture media	108		103% - 112%	
	EDTA Plasma	85		81% - 88%	
	Cit plasma	91		85% - 97%	
全工程の試験時間	1h 30m				
ステップ	One step assay				
種交差性	交差種: Rat				

非交差種: Cow

製品の概要

Rat IL-1 beta ELISA Kit (ab255730) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of IL-1 beta protein in cell culture media, cit plasma, edta plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Rat IL-1 beta with 26.58 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.

特記事項

Interleukin-1 beta (IL-1 beta) is a 17.5 kDa cytokine protein of the Interleukin 1 family. IL-1 beta is secreted by macrophages and other cell types in response to inflammatory agents or infection. IL-1 beta plays a role in a number of cellular processes, including immune responses, bone remodeling, apoptosis and inflammatory pain hypersensitivity.

試験プラットフォーム

Pre-coated microplate (12 x 8 well strips)

製品の特性

保存方法

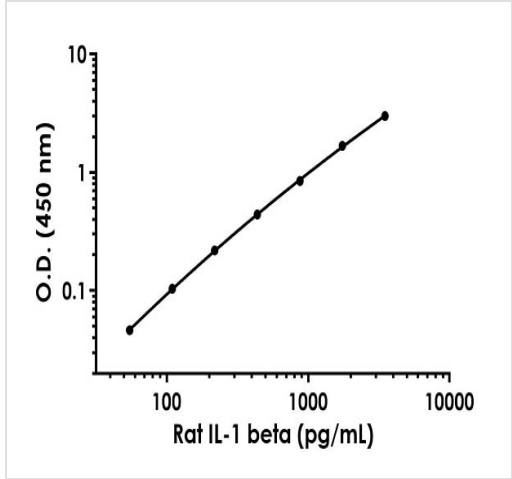
Store at +4°C. Please refer to protocols.

内容	1 x 96 tests
10X Rat IL-1 beta Capture Antibody	1 x 600µl
10X Rat IL-1 beta Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 4BR	1 x 6ml
Plate Seals	1 unit
Rat IL-1 beta Lyophilized recombinant Protein	2 vials
Sample Diluent 75BP	1 x 20ml
Sample Diluent NS (ab193972)	1 x 12ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit

内容	1 x 96 tests
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

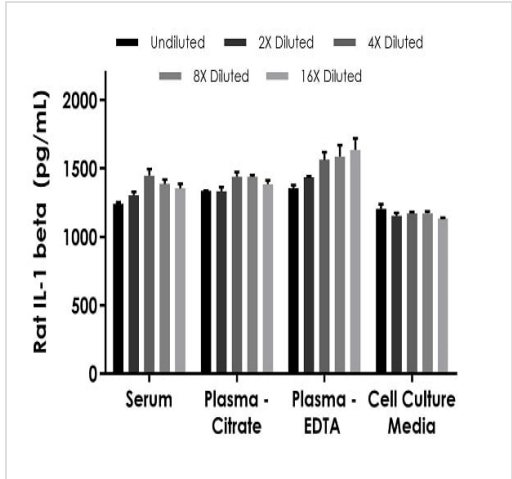
機能	Potent proinflammatory cytokine. Initially discovered as the major endogenous pyrogen, induces prostaglandin synthesis, neutrophil influx and activation, T-cell activation and cytokine production, B-cell activation and antibody production, and fibroblast proliferation and collagen production. Promotes Th17 differentiation of T-cells.
組織特異性	Expressed in activated monocytes/macrophages (at protein level).
配列類似性	Belongs to the IL-1 family.
翻訳後修飾	Activation of the IL1B precursor involves a CASP1-catalyzed proteolytic cleavage. Processing and secretion are temporarily associated.
細胞内局在	Cytoplasm, cytosol. Lysosome. Secreted, exosome. Cytoplasmic vesicle, autophagosome. Secreted. The precursor is cytosolic. In response to inflammasome-activating signals, such as ATP for NLRP3 inflammasome or bacterial flagellin for NLRC4 inflammasome, cleaved and secreted. IL1B lacks any known signal sequence and the pathway(s) of its secretion is(are) not yet fully understood (PubMed:24201029). On the basis of experimental results, several unconventional secretion mechanisms have been proposed. 1. Secretion via secretory lysosomes: a fraction of CASP1 and IL1B precursor may be incorporated, by a yet undefined mechanism, into secretory lysosomes that undergo Ca(2+)-dependent exocytosis with release of mature IL1B (PubMed:15192144). 2. Secretory autophagy: IL1B-containing autophagosomes may fuse with endosomes or multivesicular bodies (MVBs) and then merge with the plasma membrane releasing soluble IL1B or IL1B-containing exosomes (PubMed:24201029). However, autophagy impacts IL1B production at several levels and its role in secretion is still controversial. 3. Secretion via exosomes: ATP-activation of P2RX7 leads to the formation of MVBs containing exosomes with entrapped IL1B, CASP1 and other inflammasome components. These MVBs undergo exocytosis with the release of exosomes. The release of soluble IL1B occurs after the lysis of exosome membranes (By similarity). 4. Secretion by microvesicle shedding: activation of the ATP receptor P2RX7 may induce an immediate shedding of membrane-derived microvesicles containing IL1B and possibly inflammasome components. The cytokine is then released in the extracellular compartment after microvesicle lysis (PubMed:11728343). 5. Release by translocation through permeabilized plasma membrane. This may occur in cells undergoing pyroptosis due to sustained activation of the inflammasome (By similarity). These mechanisms may not be not mutually exclusive.

画像



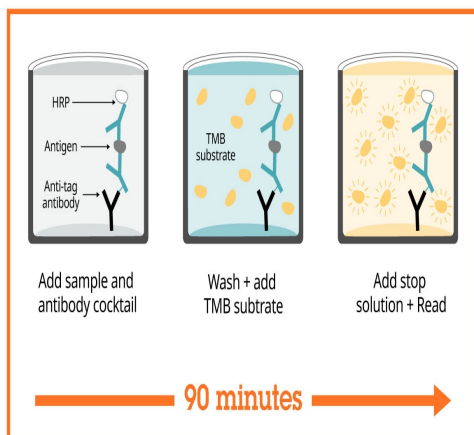
Example of rat IL-1 beta standard curve in Sample Diluent 75BP.

The IL-1 beta standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



Interpolated concentrations of spike IL-1 beta in rat serum, plasma, and cell culture media with 10% fetal bovine serum samples.

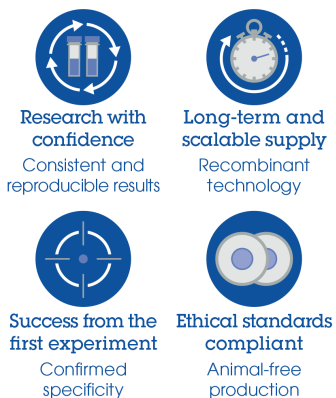
The concentrations of IL-1 beta were measured in duplicates, interpolated from the IL-1 beta standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 50%, plasma (citrate) 50%, plasma (EDTA) 50%, and 1640 RPMI media 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).



Sandwich ELISA - Rat IL-1 beta ELISA Kit
(ab255730)

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.

Powered by recombinant antibodies



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

**Get more done with
SimpleStep ELISA**



Easy to use

Single-wash 90-minute protocol



Flexible

Matched antibody pairs available



Precision antibodies

High sensitivity, specificity and reproducibility



Scalable

Now in 10-pack and 384-well formats

To learn more about the advantages of SimpleStep ELISA® kits see [here](#).

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