

Datasheet for ABIN411294

## IL-1 beta ELISA Kit



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59 Publications

### Overview

Quantity:	96 tests
Target:	IL-1 beta (IL1B)
Binding Specificity:	AA 118-269
Reactivity:	Mouse
Method Type:	Sandwich ELISA
Detection Range:	12.5-800 pg/mL
Minimum Detection Limit:	12.5 pg/mL
Application:	ELISA

### Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Mouse IL-1 beta
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: V118-S269
Specificity:	Expression system for standard: E.coli,V118-S269
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.
Sensitivity:	<1pg/mL

## Product Details

Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl
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## Target Details

Target:	IL-1 beta (IL1B)
Alternative Name:	IL1B ( <a href="#">IL1B Products</a> )
Background:	<p>Protein Function: Produced by activated macrophages, IL-1 stimulates thymocyte proliferation by inducing IL-2 release, B-cell maturation and proliferation, and fibroblast growth factor activity. IL-1 proteins are involved in the inflammatory response, being identified as endogenous pyrogens, and are reported to stimulate the release of prostaglandin and collagenase from synovial cells.</p> <p>Background: Interleukin-1beta(IL-1beta) is a potent stimulator of bone resorption whose gene is mapped to 2q14, and has been implicated in the pathogenesis of high bone turnover and osteoporosis. IL-1beta, a prominent microglia-derived cytokine, caused oligodendrocyte death in coculture with astrocytes and microglia, but not in pure culture of oligodendrocytes alone<sup>1</sup>. It also can cause nuclear export of a specific NCOR corepressor complex, resulting in derepression of a specific subset of nuclear factor-kappa-B(NFKB)-regulated genes<sup>2</sup>. Furthermore, Microenvironmental IL-1beta and, to a lesser extent, IL-1alpha are required for in vivo angiogenesis and invasiveness of different tumor cells<sup>3</sup>. Additional, the cooperation of IL-1beta and PDGFB induces contractile-to-synthetic phenotype modulation of human aortic smooth muscle cells in culture<sup>4</sup>. Moreover, the association with disease may be explained by the biologic properties of IL-1beta, which is an important proinflammatory cytokine and a powerful inhibitor of gastric acid secretion.</p> <p>Synonyms: Interleukin-1 beta,IL-1 beta,Il1b,</p> <p>Full Gene Name: Interleukin-1 beta</p> <p>Cellular Localisation: Secreted. The lack of a specific hydrophobic segment in the precursor sequence suggests that IL-1 is released by damaged cells or is secreted by a mechanism differing from that used for other secretory proteins.</p>
Gene ID:	16176
UniProt:	<a href="#">P10749</a>
Pathways:	<a href="#">NF-kappaB Signaling</a> , <a href="#">Interferon-gamma Pathway</a> , <a href="#">TLR Signaling</a> , <a href="#">Negative Regulation of Hormone Secretion</a> , <a href="#">Cellular Response to Molecule of Bacterial Origin</a> , <a href="#">Carbohydrate</a>

## Target Details

[Homeostasis](#), [Glycosaminoglycan Metabolic Process](#), [Myometrial Relaxation and Contraction](#), [Regulation of Leukocyte Mediated Immunity](#), [Positive Regulation of Immune Effector Process](#), [Autophagy](#), [Cancer Immune Checkpoints](#), [Inflammasome](#)

## Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.
Plate:	Pre-coated
Protocol:	mouse IL-1 beta ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for IL-1 beta has been precoated onto 96-well plates. Standards (E.coli,V118-S269) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for IL-1 beta is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the mouse IL-1 beta amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 800pg/mL, 400pg/mL, 200pg/mL, 100pg/mL, 50pg/mL, 25pg/mL, 12.5pg/mL mouse IL-1 beta standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of mouse cell culture supernatants, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each mouse IL-1 betastandard solution and each sample is measured in duplicate.
Assay Precision:	<ul style="list-style-type: none"><li>• Sample 1: n=16, Mean(pg/ml): 86, Standard deviation: 6.97, CV(%): 8.1</li><li>• Sample 2: n=16, Mean(pg/ml): 376, Standard deviation: 19.55, CV(%): 5.2</li><li>• Sample 3: n=16, Mean(pg/ml): 587, Standard deviation: 24.07, CV(%): 4.1,</li><li>• Sample 1: n=24, Mean(pg/ml): 79, Standard deviation: 7.03, CV(%): 8.9</li><li>• Sample 2: n=24, Mean(pg/ml): 346, Standard deviation: 25.6, CV(%): 7.4</li><li>• Sample 3: n=24, Mean(pg/ml): 558, Standard deviation: 37.94, CV(%): 6.8</li></ul>
Restrictions:	For Research Use only

## Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
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Handling

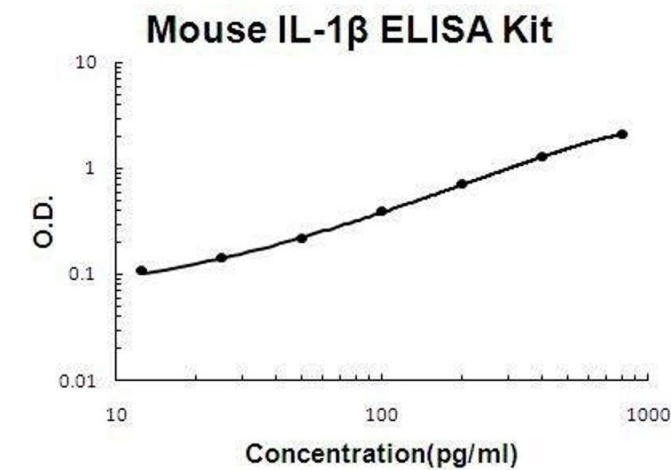
Storage:	-20 °C,4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

Publications

Product cited in: Mern, Fontana, Beierfuß, Thomé, Hegewald et al.: "A combinatorial relative mass value evaluation of endogenous bioactive proteins in three-dimensional cultured nucleus pulposus cells of herniated intervertebral discs: identification of potential ..." in: **PLoS ONE**, Vol. 8, Issue 11 , pp. e81467, (2013) ([PubMed](#)).

There are more publications referencing this product on: [Product page](#)

Images



ELISA

Image 1.