

Datasheet for ABIN921061

IL-1 beta ELISA Kit

1 Image

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Overview

Quantity:	96 tests
Target:	IL-1 beta (IL1B)
Binding Specificity:	AA 117-268
Reactivity:	Rat
Method Type:	Sandwich ELISA
Detection Range:	31.2-2000 pg/mL
Minimum Detection Limit:	31.2 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Rat 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: V117-S268
Specificity:	Expression system for standard: E.coli,V117-S268
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 (IL1B Products)
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: The Interleukin 1 family is a group of 11 beta trefoil cytokines. Interleukin-1, produced mainly by blood monocytes, mediates the panoply of host reactions collectively known as acute phase response . Interleukin-1beta(IL-1beta) is a potent stimulator of bone resorption, and has been implicated in the pathogenesis of high bone turnover and osteoporosis. IL-1beta belongs to proinflammatory cytokines, promote cancer cell adhesion and liver metastases by up-regulating the expression of vascular cell adhesion molecule-1(VCAM-1) on hepatic sinusoidal endothelium(HSE).</p> <p>Synonyms: Interleukin 1 beta ,Interleukin-1 beta ,Il1b ,rCG_27107 ,</p> <p>Full Gene Name: interleukin 1, beta</p>
Gene ID:	24494
UniProt:	Q5BKB0
Pathways:	NF-kappaB Signaling , Interferon-gamma Pathway , TLR Signaling , Negative Regulation of Hormone Secretion , Cellular Response to Molecule of Bacterial Origin , Carbohydrate 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.
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Application Details

Plate:	Pre-coated
Protocol:	rat IL-1 beta ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for IL-1 beta has been precoated onto 96-well plates. Standards (E.coli,V117-S268) 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 rat IL-1 beta amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 2000pg/mL, 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL rat 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 rat cell culture supernatants, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each rat IL-1 beta standard solution and each sample is measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 105, Standard deviation: 3.99, CV(%): 3.8• Sample 2: n=16, Mean(pg/ml): 756, Standard deviation: 34.78, CV(%): 4.6• Sample 3: n=16, Mean(pg/ml): 1359, Standard deviation: 66.59, CV(%): 4.9,• Sample 1: n=24, Mean(pg/ml): 112, Standard deviation: 5.712, CV(%): 5.1• Sample 2: n=24, Mean(pg/ml): 688, Standard deviation: 37.84, CV(%): 5.5• Sample 3: n=24, Mean(pg/ml): 1452, Standard deviation: 92.93, CV(%): 6.4
Restrictions:	For Research Use only

Handling

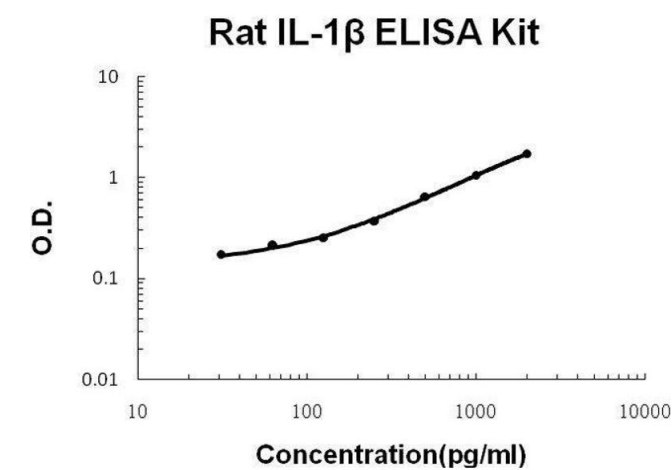
Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C, 4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

Publications

Product cited in:	Romano, Chiaro, Lucarelli, Santarelli, Cucchiara, Guadagnini, Miele, Di Nardo: "Mucosal cytokine profiles in paediatric eosinophilic oesophagitis: A case-control study." in: Digestive and liver
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disease : official journal of the Italian Society of Gastroenterology and the Italian Association for the Study of the Liver, (2014) ([PubMed](#)).

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



ELISA

Image 1. Rat IL-1 beta PicoKine ELISA Kit standard curve