

Datasheet for ABIN921064

**IL-6 ELISA Kit**[Go to Product page](#)**1** Image **144** Publications

## Overview

Quantity:	96 tests
Target:	IL-6 (IL6)
Binding Specificity:	AA 25-211
Reactivity:	Rat
Method Type:	Sandwich ELISA
Detection Range:	62.5-4000 pg/mL
Minimum Detection Limit:	62.5 pg/mL
Application:	ELISA

## Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Rat IL-6
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Plasma (citrate)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: F25-T211
Specificity:	Expression system for standard: E.coli Immunogen sequence: F25-T211
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

## Product Details

Sensitivity:	<5pg/mL
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

## Target Details

Target:	IL-6 (IL6)
Alternative Name:	IL6 ( <a href="#">IL6 Products</a> )
Background:	<p>Protein Function: Cytokine with a wide variety of biological functions. It is a potent inducer of the acute phase response. Plays an essential role in the final differentiation of B-cells into Ig-secreting cells Involved in lymphocyte and monocyte differentiation. Acts on B-cells, T-cells, hepatocytes, hematopoietic progenitor cells and cells of the CNS. Required for the generation of T(H)17 cells. Also acts as a myokine. It is discharged into the bloodstream after muscle contraction and acts to increase the breakdown of fats and to improve insulin resistance. It induces myeloma and plasmacytoma growth and induces nerve cells differentiation (By similarity). .</p> <p>Background: Interleukin-6(IL-6) is a protein that in humans is encoded by the IL6 gene. Interleukin-6(IL-6) is involved not only in the hepatic acute phase response but also in adipose tissue metabolism, lipoprotein lipase activity, and hepatic triglyceride secretion. IL-6 is a pleiotropic cytokine that plays a critical role in bone resorption. IL-6 has been suggested to stimulate the HPA axis during immune activation independent of the input of hypothalamic corticotropin-releasing hormone(CRH). Interleukin-6(IL-6) is an immunoregulatory cytokine that activates a cell-surface signaling assembly composed of IL-6, the IL-6 alpha-receptor(IL-6Ralpha), and the shared signaling receptor gp130. The standard product used in this kit is recombinant rat IL-6, consisting of 188 amino acids with the molecular mass of 21.8 kDa.</p> <p>Synonyms: Interleukin-6,IL-6,Il6,Il-6,</p> <p>Full Gene Name: Interleukin-6</p> <p>Cellular Localisation: Secreted.</p>
Gene ID:	24498
UniProt:	<a href="#">P20607</a>
Pathways:	<a href="#">TLR Signaling</a> , <a href="#">Hormone Transport</a> , <a href="#">Negative Regulation of Hormone Secretion</a> , <a href="#">Myometrial Relaxation and Contraction</a> , <a href="#">Positive Regulation of Immune Effector Process</a> , <a href="#">Production of</a>

## Target Details

Molecular Mediator of Immune Response, Regulation of Carbohydrate Metabolic Process, Autophagy, Cell Redox Homeostasis, 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:	rat IL-6 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for IL-6 has been precoated onto 96-well plates. Standards (E.coli, F25-T211) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for IL-6 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-6 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 4000pg/mL, 2000pg/mL, 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL rat IL-6 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 supernates, serum or plasma (heparin, EDTA, citrate) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each rat IL-6 standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none"><li>• Sample 1: n=16, Mean(pg/ml): 150, Standard deviation: 13.65, CV(%): 9.1</li><li>• Sample 2: n=16, Mean(pg/ml): 392, Standard deviation: 34.89, CV(%): 8.9</li><li>• Sample 3: n=16, Mean(pg/ml): 1635, Standard deviation: 91.56, CV(%): 5.6,</li><li>• Sample 1: n=24, Mean(pg/ml): 176, Standard deviation: 16.72, CV(%): 9.5</li><li>• Sample 2: n=24, Mean(pg/ml): 415, Standard deviation: 38.18, CV(%): 9.2</li><li>• Sample 3: n=24, Mean(pg/ml): 1474, Standard deviation: 110.55, CV(%): 7.5</li></ul>
Restrictions:	For Research Use only

## Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C, 4 °C

## Handling

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

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Expiry Date: 12 months

## Publications

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Product cited in: Wang, Mao, Yang, Zou, Liu, Liu, Zhang, Xiao, Wang: "Resveratrol protects against early polymicrobial sepsis-induced acute kidney injury through inhibiting endoplasmic reticulum stress-activated NF-κB pathway." in: **Oncotarget**, Vol. 8, Issue 22, pp. 36449-36461, (2018) ([PubMed](#)).

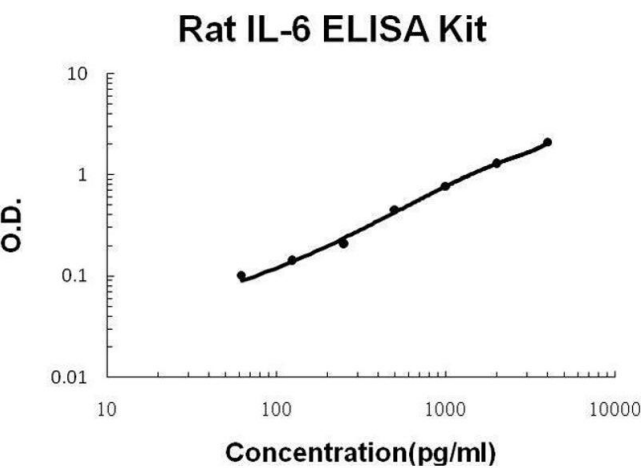
Piao, Liu, Guo, Meng, Gao: "Picroside II Shows Protective Functions for Severe Acute Pancreatitis in Rats by Preventing NF-κB-Dependent Autophagy." in: **Oxidative medicine and cellular longevity**, Vol. 2017, pp. 7085709, (2018) ([PubMed](#)).

Chen, Wu, Chen, Xie, Fang, Hu, Chen, Fu, He: "Omega-3 polyunsaturated fatty acid supplementation attenuates microglial-induced inflammation by inhibiting the HMGB1/TLR4/NF-κB pathway following experimental traumatic brain injury." in: **Journal of neuroinflammation**, Vol. 14, Issue 1, pp. 143, (2018) ([PubMed](#)).

Xiong, Ru, Chen, Tian, Li: "Mitochondrial dysfunction and inflammatory response in the cytotoxicity of NR8383 macrophages induced by fine particulate matter." in: **Environmental toxicology and pharmacology**, Vol. 55, pp. 1-7, (2018) ([PubMed](#)).

Duan, Lu, Wang, Zhang, Mao, Cao, Lin, Zhang, Shuai, Shen: "The long-term fate of mesenchymal stem cells labeled with magnetic resonance imaging-visible polymersomes in cerebral ischemia." in: **International journal of nanomedicine**, Vol. 12, pp. 6705-6719, (2018) ([PubMed](#)).

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



**ELISA**

**Image 1.** Rat IL-6 PicoKine ELISA Kit standard curve