

Datasheet for ABIN411405

**IL-18 ELISA Kit****1** Image**8** Publications[Go to Product page](#)

## Overview

Quantity:	96 tests
Target:	IL-18 (IL18)
Binding Specificity:	AA 33-197
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	15.6-1000 pg/mL
Minimum Detection Limit:	15.6 pg/mL
Application:	ELISA

## Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human IL-18
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: Y33-D197
Specificity:	Expression system for standard: E.coli Immunogen sequence: Y33-D197
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

## Product Details

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Sensitivity: <1pg/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

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Target: IL-18 (IL18)

Alternative Name: IL18 ([IL18 Products](#))

Background: Protein Function: Augments natural killer cell activity in spleen cells and stimulates interferon gamma production in T-helper type I cells.

Background: Interleukin(IL)-18, also called Interferon-gamma-inducing factor(IGIF), augments natural killer(NK) activity in spleen cells. The gene encodes a precursor protein of 192 amino acids and a mature protein of 157 amino acids.1 IL-18 is a recently discovered cytokine that modulates both T helper type 1(Th1) and Th2 responses.2 IL-18 is a potent proinflammatory cytokine with potential atherogenic properties. It is highly expressed in the atherosclerotic plaques compared with control normal arteries and is localized mainly in plaque macrophages.3

Synonyms: Interleukin-18,IL-18,Iboctadekin,Interferon gamma-inducing factor,IFN-gamma-inducing factor,Interleukin-1 gamma,IL-1 gamma,IL18,IGIF, IL1F4,

Full Gene Name: Interleukin-18

Cellular Localisation: Secreted.

Gene ID: 3606

UniProt: [Q14116](#)

Pathways: [Cellular Response to Molecule of Bacterial Origin](#), [Activated T Cell Proliferation](#), [Cancer Immune Checkpoints](#), [Inflammasome](#)

## Application Details

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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.

Comment: Sequence similarities: Belongs to the IL-1 family.

Plate: Pre-coated

## Application Details

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**Protocol:** human IL-18 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for IL-18 has been precoated onto 96-well plates. Standards(E.coli, Y33-D197) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for IL-18 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 human IL-18 amount of sample captured in plate.

**Assay Procedure:** Aliquot 0.1 mL per well of the 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL, 15.6pg/mL human IL-18 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 human cell culture supernates, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human IL-18 standard solution and each sample be measured in duplicate.

**Assay Precision:**

- Sample 1: n=16, Mean(pg/ml): 135, Standard deviation: 5.8, CV(%): 4.3
- Sample 2: n=16, Mean(pg/ml): 380, Standard deviation: 23.2, CV(%): 6.1
- Sample 3: n=16, Mean(pg/ml): 762, Standard deviation: 41.9, CV(%): 5.5,
- Sample 1: n=24, Mean(pg/ml): 141, Standard deviation: 7.3, CV(%): 5.2
- Sample 2: n=24, Mean(pg/ml): 425, Standard deviation: 29.3, CV(%): 6.9
- Sample 3: n=24, Mean(pg/ml): 776, Standard deviation: 45.1, CV(%): 5.8

**Restrictions:** For Research Use only

## Handling

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**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

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**Product cited in:** Wang, Qin, Wang, Chen, Lang, Zheng, Gao, Chen, Zhong, Mu, Wu, Zhang, Zhao, Zhong: "Pyroptosis induced by enterovirus 71 and coxsackievirus B3 infection affects viral replication and host response." in: **Scientific reports**, Vol. 8, Issue 1, pp. 2887, (2018) ([PubMed](#)).

Wan, Yuan, Liu, Xue: "miRNA-223-3p regulates NLRP3 to promote apoptosis and inhibit proliferation of hep3B cells." in: **Experimental and therapeutic medicine**, Vol. 15, Issue 3, pp. 2429-2435, (2018) ([PubMed](#)).

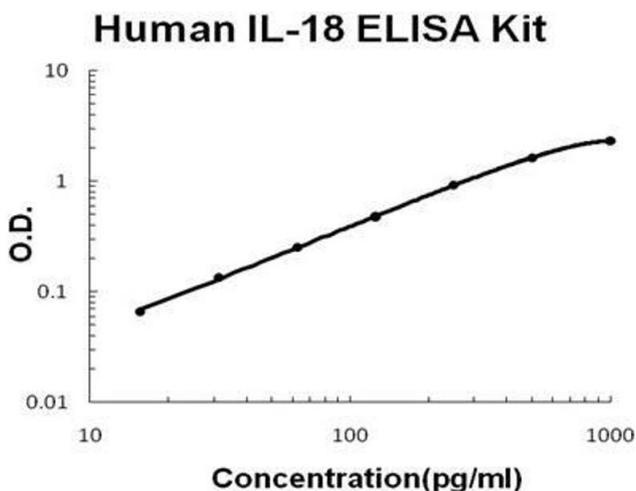
Zhao, Shen, Feng, He, Xu, Xie, Shi, Zhou, Pan, Wang, Guo, Qin: "Regulatory B cells induced by pancreatic cancer cell-derived interleukin-18 promote immune tolerance via the PD-1/PD-L1 pathway." in: **Oncotarget**, Vol. 9, Issue 19, pp. 14803-14814, (2018) ([PubMed](#)).

Esfahani, Saidijam, Najafi, Goodarzi, Movahedian: "The effect of salusin- $\beta$  on expression of pro- and anti-inflammatory cytokines in human umbilical vein endothelial cells (HUVECs)." in: **ARYA atherosclerosis**, Vol. 14, Issue 1, pp. 1-10, (2018) ([PubMed](#)).

Trentini, Castellazzi, Cervellati, Manfrinato, Tamborino, Hanau, Volta, Baldi, Kostic, Drulovic, Granieri, Dallochio, Bellini, Dujmovic, Fainardi: "Interplay between Matrix Metalloproteinase-9, Matrix Metalloproteinase-2, and Interleukins in Multiple Sclerosis Patients." in: **Disease markers**, Vol. 2016, pp. 3672353, (2017) ([PubMed](#)).

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

Images



**ELISA**  
**Image 1.** Human IL-18 PicoKine ELISA Kit standard curve