

Datasheet for ABIN411299

IL-4 ELISA Kit



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Overview

Quantity:	96 tests
Target:	IL-4 (IL4)
Binding Specificity:	AA 25-153
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-4
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: H25-S153
Specificity:	Expression system for standard: E.coli Immunogen sequence: H25-S153
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<1.5pg/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-4 (IL4)
Alternative Name:	IL4 (IL4 Products)
Background:	<p>Protein Function: Participates in at least several B-cell activation processes as well as of other cell types. It is a costimulator of DNA-synthesis. It induces the expression of class II MHC molecules on resting B-cells. It enhances both secretion and cell surface expression of IgE and IgG1. It also regulates the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes. .</p> <p>Background: Interleukin-4(IL-4), also known as a B-cell stimulatory factor1(BSF1), is an immunomodulatory cytokine, which can inhibit the growth of tumour cells. The human cDNA contains a single open reading frame encoding a protein of 153 amino acids, including a putative signal peptide. IL-4 may act as an autocrine growth factor in pancreatic cancer cells and also give rise to the possibility that cancer-derived IL-4 may suppress cancer-directed immunosurveillance in vivo in addition to its growth-promoting effects, thereby facilitating pancreatic tumor growth and metastasis. The mouse and human genes and their protein products show structural and functional similarities. The human IL-4 gene, which occurs as a single copy in the haploid genome, is mapped on chromosome 5. The standard product used in this kit is recombinant human IL-4, consisting of 130 amino acids with the molecular mass of 14KDa.</p> <p>Synonyms: Interleukin-4 ,IL-4 ,B-cell stimulatory factor 1 ,Lymphocyte stimulatory factor 1 ,IL4 ,hCG_24113 ,</p> <p>Full Gene Name: Interleukin-4</p> <p>Cellular Localisation: Secreted.</p>
Gene ID:	3565
UniProt:	D4HNR6
Pathways:	JAK-STAT Signaling , Regulation of Leukocyte Mediated Immunity , Positive Regulation of Immune Effector Process , Production of Molecular Mediator of Immune Response , Proton

Target Details

Transport, Activated T Cell Proliferation

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:	human IL-4 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for IL-4 has been precoated onto 96-well plates. Standards(E.coli, H25-S153) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for IL-4 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-4 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-4 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-4 standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 55.4, Standard deviation: 2.5, CV(%): 4.5• Sample 2: n=16, Mean(pg/ml): 361, Standard deviation: 14.8, CV(%): 4.1• Sample 3: n=16, Mean(pg/ml): 638, Standard deviation: 37.64, CV(%): 5.9,• Sample 1: n=24, Mean(pg/ml): 45.8, Standard deviation: 2.977, CV(%): 6.5• Sample 2: n=24, Mean(pg/ml): 375, Standard deviation: 24, CV(%): 6.4• Sample 3: n=24, Mean(pg/ml): 656, Standard deviation: 46.58, CV(%): 7.1
Restrictions:	For Research Use only

Handling

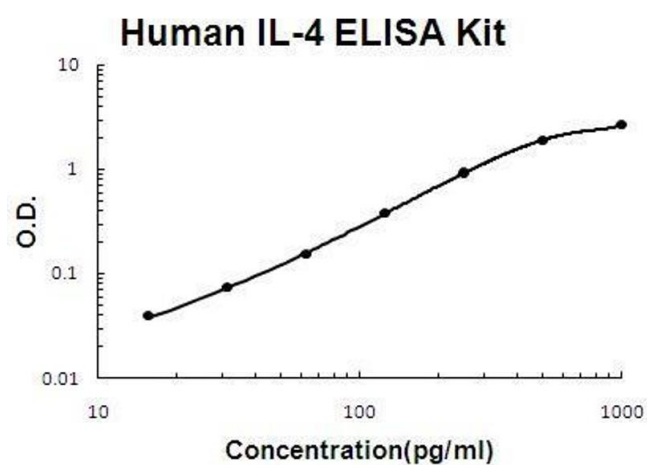
Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C, 4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles

Handling

Expiry Date: 12 months

Publications

- Product cited in:
- Dang, Xie, Zhou: "Expression of PYCARD gene transcript variant mRNA in peripheral blood mononuclear cells of primary gout patients with different Chinese medicine syndromes." in: **Chinese journal of integrative medicine**, Vol. 24, Issue 1, pp. 24-31, (2018) ([PubMed](#)).
- Liu, Piao, Guo, Wang, Sun, Gao, Zheng, Fang: "A New Chinese Medicine Intestine Formula Greatly Improves the Effect of Aminosalicylate on Ulcerative Colitis." in: **Evidence-based complementary and alternative medicine : eCAM**, Vol. 2017, pp. 7323129, (2017) ([PubMed](#)).
- Zang, Jiang, Li, DU, Niu: "Characteristics of CD4+CD25+Foxp3+ regulatory T cells in patients with multiple organ dysfunction syndrome." in: **Experimental and therapeutic medicine**, Vol. 11, Issue 5, pp. 1908-1912, (2016) ([PubMed](#)).
- Jin, Wu, Wang, Peng: "Capsaicin induces immunogenic cell death in human osteosarcoma cells." in: **Experimental and therapeutic medicine**, Vol. 12, Issue 2, pp. 765-770, (2016) ([PubMed](#)).
- Li, Hu, Wang, Wu, Zhang: "Different profiles of notch signaling in cigarette smoke-induced pulmonary emphysema and bleomycin-induced pulmonary fibrosis." in: **Inflammation research : official journal of the European Histamine Research Society ... [et al.]**, Vol. 64, Issue 5, pp. 363-71, (2015) ([PubMed](#)).
- There are more publications referencing this product on: [Product page](#)



ELISA

Image 1. Human IL-4 PicoKine ELISA Kit standard curve