

Datasheet for ABIN1672845

IL12B ELISA Kit



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Overview

Quantity:	96 tests
Target:	IL12B
Binding Specificity:	AA 23-335
Reactivity:	Mouse
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 Mouse IL-12(p40)
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: sf21 Immunogen sequence: M23-S335
Specificity:	Expression system for standard: sf21 Immunogen sequence: M23-S335
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<10pg/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:	IL12B
Alternative Name:	IL12B (IL12B Products)
Background:	<p>Protein Function: Cytokine that can act as a growth factor for activated T and NK cells, enhance the lytic activity of NK/lymphokine- activated killer cells, and stimulate the production of IFN- gamma by resting PBMC. .</p> <p>Background: Interleukin-12(IL12, formerly NKSF, for natural killer cell stimulatory factor, or CLMF, for cytotoxic lymphocyte maturation factor) is a novel cytokine cloned from B-cell lines. IL-12 is a heterodimeric molecule composed of p35 and p40 subunits.¹ The larger 40- kDa subunit(p40) is a member of the cytokine receptor family, and the smaller 35- kDa subunit(p35) is related to IL6 and GCSF.² Both IL-12 p40(-/-) and p35(-/-) mice fail to produce IL-12 p70 heterodimer.³ Interleukin(IL)-12 has been cloned on the basis of its ability to activate natural killer(NK) cells and promote the development of cytolytic T cells. With further understanding of its activities, IL-12 has emerged as an important cytokine, affecting both immune and hematologic functions. It has been shown to be necessary for the T cell independent induction of interferon(IFN)-gamma, critical for the initial suppression of bacterial and parasitic infection, for the development of a Th1 response, critical for effective host defense against intracellular pathogens, and for the activation of differentiated T lymphocytes of both CD4+ and CD8+ phenotype.</p> <p>Synonyms: Interleukin-12 subunit beta,IL-12B,Cytotoxic lymphocyte maturation factor 40 kDa subunit,CLMF p40,IL-12 subunit p40,Il12b,</p> <p>Full Gene Name: Interleukin-12 subunit beta</p> <p>Cellular Localisation: Secreted.</p>
Gene ID:	16160
UniProt:	P43432
Pathways:	JAK-STAT Signaling , Cellular Response to Molecule of Bacterial Origin , Regulation of Leukocyte Mediated Immunity , Positive Regulation of Immune Effector Process , Activated T Cell

Target Details

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.
Comment:	Sequence similarities: Belongs to the type I cytokine receptor family. Type 3 subfamily.
Plate:	Pre-coated
Protocol:	mouse IL-12(p40) ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for IL-12(p40) has been precoated onto 96-well plates. Standards(sf21, M23-S335) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for IL-12(p40) 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-12(p40) 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 mouse IL-12(p40) 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 supernates, serum or plasma(heparin, EDTA, citrate) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each mouse IL-12(p40) standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 136, Standard deviation: 8.3, CV(%): 6.1• Sample 2: n=16, Mean(pg/ml): 390, Standard deviation: 20.28, CV(%): 5.2• Sample 3: n=16, Mean(pg/ml): 683, Standard deviation: 31.42, CV(%): 4.6,• Sample 1: n=24, Mean(pg/ml): 165, Standard deviation: 11.55, CV(%): 7• Sample 2: n=24, Mean(pg/ml): 446, Standard deviation: 30.33, CV(%): 6.8• Sample 3: n=24, Mean(pg/ml): 716, Standard deviation: 40.1, CV(%): 5.6
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: Li, Diao, Guo, Huang, Yang, Feng, Yan, Ning, Zheng, Chen, Wu: "VSI4 inhibits proinflammatory macrophage activation by reprogramming mitochondrial pyruvate metabolism." in: **Nature communications**, Vol. 8, Issue 1, pp. 1322, (2018) ([PubMed](#)).

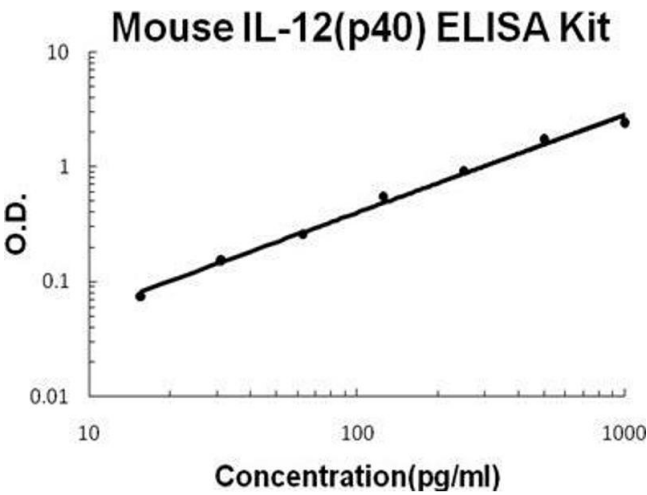
Du, Chen, Wang, Sun: "Pathway analysis of global gene expression change in dendritic cells induced by the polysaccharide from the roots of *Actinidia eriantha*." in: **Journal of ethnopharmacology**, Vol. 214, pp. 141-152, (2018) ([PubMed](#)).

Zhang, Yang, Li, Yang, Zhao, Wang, Wu: "Immunostimulatory activity of water-extractable polysaccharides from *Cistanche deserticola* as a plant adjuvant in vitro and in vivo." in: **PLoS ONE**, Vol. 13, Issue 1, pp. e0191356, (2018) ([PubMed](#)).

Wen, Xiong, He, Zhang, Du, Liu, Wang, Zhou, Ma: "Fusion cytokine IL-2-GM-CSF enhances anticancer immune responses through promoting cell-cell interactions." in: **Journal of translational medicine**, Vol. 14, pp. 41, (2016) ([PubMed](#)).

Li, Li, Liu, Zhuang, Yang, Zhang: "Intranasal immunization with recombinant *Lactococci* carrying human papillomavirus E7 protein and mouse interleukin-12 DNA induces E7-specific antitumor effects in C57BL/6 mice." in: **Oncology letters**, Vol. 7, Issue 2, pp. 576-582, (2014) ([PubMed](#)).

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



ELISA

Image 1. Mouse IL-12(p40) PicoKine ELISA Kit standard curve