

Datasheet for ABIN411298

## IL-3 ELISA Kit



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### Overview

Quantity:	96 tests
Target:	IL-3
Binding Specificity:	AA 27-166
Reactivity:	Mouse
Method Type:	Sandwich ELISA
Detection Range:	7.8-500 pg/mL
Minimum Detection Limit:	7.8 pg/mL
Application:	ELISA

### Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Mouse IL-3
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: A27-C166
Specificity:	Expression system for standard: E.coli,A27-C166
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-3
Alternative Name:	IL3 ( <a href="#">IL-3 Products</a> )
Background:	<p>Protein Function: Granulocyte/macrophage colony-stimulating factors are cytokines that act in hematopoiesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages.</p> <p>Background: The gene IL-3 encodes interleukin 3, a hematopoietic colony-stimulating factor(CSF) that is capable of supporting the proliferation of a broad range of hematopoietic cell types. Interleukin-3(IL-3), a protein of 140 amino acids, is chemically synthesized by means of an automated peptide synthesizer and is shown to have the biological activities attributed to native IL-3. The cDNA sequence for murine interleukin-3, one of the colony stimulating factors that regulate haematopoiesis, codes for a polypeptide of 166 amino acids including a putative signal peptide. The mouse IL 3 gene is located on chromosome 11. The human gene encoding IL 3 is tandemly arrayed on the long arm of chromosome 5. The standard product used in this kit is recombinant mouse IL-3, consisting of 135 amino acids with the molecular mass of 15KDa.</p> <p>Synonyms: Interleukin-3,IL-3,Hematopoietic growth factor,Mast cell growth factor,MCGF,Multipotential colony-stimulating factor,P-cell-stimulating factor,IL3,Csflu, IL-3,</p> <p>Full Gene Name: Interleukin-3</p> <p>Cellular Localisation: Secreted.</p>
Gene ID:	16187
UniProt:	<a href="#">P01586</a>
Pathways:	<a href="#">JAK-STAT Signaling</a> , <a href="#">Regulation of Carbohydrate Metabolic Process</a> , <a href="#">Autophagy</a>

## 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:	Tissue Specificity: Activated T-cells, mast cells, natural killer cells.

## Application Details

Plate:	Pre-coated
Protocol:	mouse IL-3 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for IL-3 has been precoated onto 96-well plates. Standards (E.coli,A27-C166) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for IL-3 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-3 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.3pg/mL, 15.6pg/mL, 7.8pg/mL mouse IL-3 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 or serum to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each mouse IL-3 standard solution and each sample is measured in duplicate.
Assay Precision:	<ul style="list-style-type: none"><li>• Sample 1: n=16, Mean(pg/ml): 32.6, Standard deviation: 1.793, CV(%): 5.5</li><li>• Sample 2: n=16, Mean(pg/ml): 156, Standard deviation: 9.516, CV(%): 6.1</li><li>• Sample 3: n=16, Mean(pg/ml): 364, Standard deviation: 23.66, CV(%): 6.5,</li><li>• Sample 1: n=24, Mean(pg/ml): 43.7, Standard deviation: 2.75, CV(%): 6.3</li><li>• Sample 2: n=24, Mean(pg/ml): 164, Standard deviation: 11.81, CV(%): 7.2</li><li>• Sample 3: n=24, Mean(pg/ml): 348, Standard deviation: 26.1, CV(%): 7.5</li></ul>
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:	Leira, Ameijera, Domínguez, López-Arias, Ávila-Gómez, Pérez-Mato, Sobrino, Campos, DAiuto, Leira, Blanco: "Periodontal inflammation is related to increased serum calcitonin gene-related
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peptide levels in patients with chronic migraine." in: **Journal of periodontology**, Vol. 90, Issue 10 , pp. 1088-1095, (2020) ([PubMed](#)).

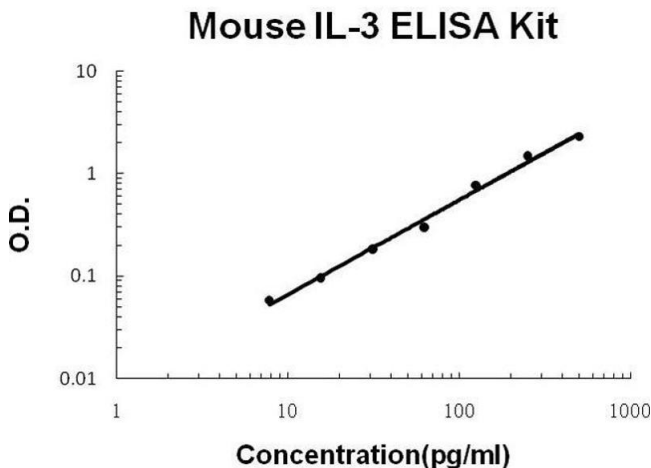
Tarperi, Sanchis-Gomar, Montagnana, Danese, Salvagno, Gelati, Skroce, Schena, Lippi: "Effects of endurance exercise on serum concentration of calcitonin gene-related peptide (CGRP): a potential link between exercise intensity and headache." in: **Clinical chemistry and laboratory medicine**, Vol. 58, Issue 10, pp. 1707-1712, (2020) ([PubMed](#)).

Pérez-Pereda, Toriello-Suárez, Ocejó-Vinyals, Guiral-Foz, Castillo-Obeso, Montes-Gómez, Martínez-Nieto, Iglesias, González-Quintanilla, Oterino: "Serum CGRP, VIP, and PACAP usefulness in migraine: a case-control study in chronic migraine patients in real clinical practice." in: **Molecular biology reports**, Vol. 47, Issue 9, pp. 7125-7138, (2020) ([PubMed](#)).

Pinto-Sanchez, Hall, Ghajar, Nardelli, Bolino, Lau, Martin, Cominetti, Welsh, Rieder, Traynor, Gregory, De Palma, Pigrau, Ford, Macri, Berger, Bergonzelli, Surette, Collins, Moayyedi, Bercik: " Probiotic Bifidobacterium longum NCC3001 Reduces Depression Scores and Alters Brain Activity: A Pilot Study in Patients With Irritable Bowel Syndrome." in: **Gastroenterology**, Vol. 153, Issue 2, pp. 448-459.e8, (2017) ([PubMed](#)).

Lei, Zhu, Zhang, Duan, Lei, Huang: "Transient Receptor Potential Vanilloid Subtype 1 Inhibits Inflammation and Apoptosis via the Release of Calcitonin Gene-Related Peptide in the Heart after Myocardial Infarction." in: **Cardiology**, Vol. 134, Issue 4, pp. 436-43, (2016) ([PubMed](#)).

Images



ELISA

**Image 1.** Mouse IL-3 PicoKine ELISA Kit standard curve