

Datasheet for ABIN921098

IL-7 ELISA Kit[Go to Product page](#)**1** Image**1** Publication

Overview

Quantity:	96 tests
Target:	IL-7 (IL7)
Binding Specificity:	AA 26-177
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-7
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: D26-H177
Specificity:	Expression system for standard: E.coli Immunogen sequence: D26-H177
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

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

Target:	IL-7 (IL7)
Alternative Name:	IL7 (IL7 Products)
Background:	<p>Protein Function: Hematopoietic growth factor capable of stimulating the proliferation of lymphoid progenitors. It is important for proliferation during certain stages of B-cell maturation.</p> <p>Background: IL-7 a hematopoietic growth factor secreted by stromal cells in the red marrow and thymus. It is also produced by keratinocytes,¹ dendritic cells,² hepatocytes,³ neurons, and endothelial cells⁴. Interleukin 7(IL7) is a protein⁵ that in humans is encoded by the IL7 gene.^{6, 7, 8} Knockout studies in mice suggested that this cytokine plays an essential role in lymphoid cell survival.⁹ IL-7 is a cytokine important for B and T cell development. This cytokine and the hepatocyte growth factor(HGF) form a heterodimer that functions as a pre-pro-B cell growth-stimulating factor. This cytokine is found to be a cofactor for V(D)J rearrangement of the T cell receptor beta(TCRB) during early T cell development.</p> <p>Synonyms: Interleukin-7 ,IL-7 ,</p> <p>Full Gene Name: Interleukin-7</p> <p>Cellular Localisation: Secreted.</p>
Gene ID:	3574
UniProt:	A8K673
Pathways:	JAK-STAT Signaling

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-7 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay

Application Details

technology. A monoclonal antibody from mouse specific for IL-7 has been precoated onto 96-well plates. Standards(E.coli, D26-H177) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for IL-7 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-7 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-7 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(EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human IL-7 standard solution and each sample be measured in duplicate.

Assay Precision:

- Sample 1: n=16, Mean(pg/ml): 54.5, Standard deviation: 3.38, CV(%): 6.2
- Sample 2: n=16, Mean(pg/ml): 368, Standard deviation: 16.56, CV(%): 4.5
- Sample 3: n=16, Mean(pg/ml): 759, Standard deviation: 36.67, CV(%): 4.7,
- Sample 1: n=24, Mean(pg/ml): 55.9, Standard deviation: 3.86, CV(%): 6.9
- Sample 2: n=24, Mean(pg/ml): 396, Standard deviation: 27.72, CV(%): 7
- Sample 3: n=24, Mean(pg/ml): 737, Standard deviation: 41.3, CV(%): 5.6

Restrictions: For Research Use only

Handling

Handling Advice: Avoid multiple freeze-thaw cycles.

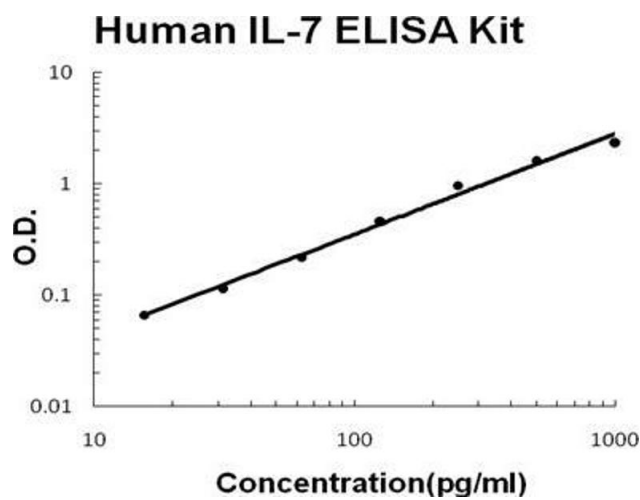
Storage: -20 °C, 4 °C

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: Guida, Luongo, Aviello, Palazzo, De Chiaro, Gatta, Boccella, Marabese, Zjawiony, Capasso, Izzo, de Novellis, Maione: "Salvinorin A reduces mechanical allodynia and spinal neuronal hyperexcitability induced by peripheral formalin injection." in: **Molecular pain**, Vol. 8, pp. 60, (2012) ([PubMed](#)).



ELISA

Image 1. Human IL-7 PicoKine ELISA Kit standard curve