Datasheet for ABIN411295

IL-2 ELISA Kit

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Overview

Quantity:	96 tests
Target:	IL-2 (IL2)
Binding Specificity:	AA 21-153
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-2
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: E.coli Immunogen sequence: A21-T153
Specificity:	Expression system for standard: E.coli,A21-T153
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

Target Details

Target:	IL-2 (IL2)
Alternative Name:	IL2 (IL2 Products)
Background:	Protein Function: Produced by T-cells in response to antigenic or mitogenic stimulation, this protein is required for T-cell proliferation and other activities crucial to regulation of the immune response. Can stimulate B-cells, monocytes, lymphokine- activated killer cells, natural killer cells, and glioma cells. Background: Interleukin-2(IL2), formerly referred to as T-cell growth factor, is a powerfully immunoregulatory lymphokine that is produced by lectin- or antigen-activated T cells. It is produced not only by mature T lymphocytes on stimulation but also constitutively by certain T-cell lymphoma cell lines. The lymphokine interleukin-2(IL-2) is responsible for autocrine cell cycle progression and regulation of immune responses. IL-2 expression in mature thymocytes and T cells has been found to be tightly controlled by monoallelic expression. IL-2 can act as a growth hormone for both B and T lymphocytes. The human gene for interleukin 2(IL2) is assigned to chromosome 4. Human IL-2 is a 15.5KDa glycoprotein, consisting of 153 amino acids in precursor form and 133 amino acids in mature form. Synonyms: Interleukin-2,IL-2,T-cell growth factor,TCGF,Aldesleukin,IL2, Full Gene Name: Interleukin-2 Cellular Localisation: Secreted.
Gene ID:	3558
UniProt:	P60568
Pathways:	JAK-STAT Signaling, Regulation of Leukocyte Mediated Immunity, Positive Regulation of Immune Effector Process, Production of Molecular Mediator of Immune Response, 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.

Application Details

Comment:	Sequence similarities: Belongs to the IL-2 family.
Plate:	Pre-coated
Protocol:	human IL-2 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for IL-2 has been precoated onto 96-well plates. Standards (E.coli,A21-T153) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for IL-2 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-2 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-2 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, citrate) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human IL-2 standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 75, Standard deviation: 3.45, CV(%): 4.6 • Sample 2: n=16, Mean(pg/ml): 272, Standard deviation: 9.52, CV(%): 3.5 • Sample 3: n=16, Mean(pg/ml): 537, Standard deviation: 16.65, CV(%): 3.1, • Sample 1: n=24, Mean(pg/ml): 96, Standard deviation: 6.048, CV(%): 6.3 • Sample 2: n=24, Mean(pg/ml): 310, Standard deviation: 16.12, CV(%): 5.2 • Sample 3: n=24, Mean(pg/ml): 643, Standard deviation: 39.2, CV(%): 6.1
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
Expiry Date:	12 months

Publications

Product cited in:

Rubiś, Wiśniowska-Smiałek, Wypasek, Rudnicka-Sosin, Hlawaty, Leśniak-Sobelga, Kostkiewicz, Podolec et al.: "12-month patterns of serum markers of collagen synthesis, transforming growth factor and connective tissue growth factor are similar in new-onset and chronic dilated cardiomyopathy in patients both ..." in: **Cytokine**, Vol. 96, pp. 217-227, (2018) (PubMed).

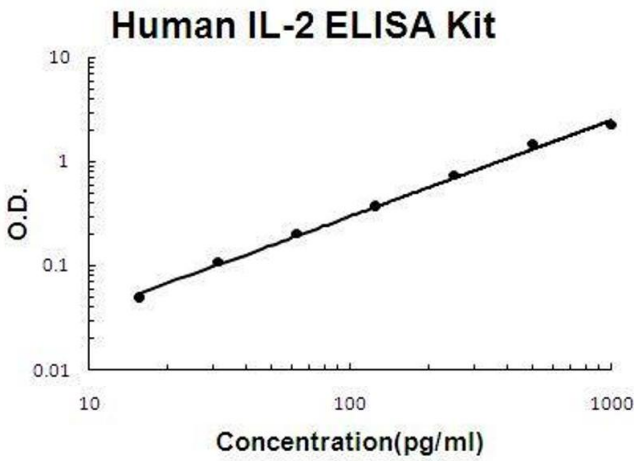
Xie, Liao, Yu, Guo, Yang, Ge, Chen, Chen: "Endothelial-to-mesenchymal transition in human idiopathic dilated cardiomyopathy." in: **Molecular medicine reports**, Vol. 17, Issue 1, pp. 961-969, (2018) (PubMed).

Rubiś, Wiśniowska-Śmiałek, Dziewięcka, Rudnicka-Sosin, Kozanecki, Podolec: "Prognostic value of fibrosis-related markers in dilated cardiomyopathy: A link between osteopontin and cardiovascular events." in: **Advances in medical sciences**, Vol. 63, Issue 1, pp. 160-166, (2018) (PubMed).

Rubiś, Wiśniowska-Śmialek, Wypasek, Biernacka-Fijalkowska, Rudnicka-Sosin, Dziewiecka, Faltyn, Khachatryan, Karabinowska, Kozanecki, Tomkiewicz-Pająk, Podolec: "Fibrosis of extracellular matrix is related to the duration of the disease but is unrelated to the dynamics of collagen metabolism in dilated cardiomyopathy." in: **Inflammation research : official journal of the European Histamine Research Society ... [et al.]**, Vol. 65, Issue 12, pp. 941-949, (2016) (PubMed).

Rubiś, Wiśniowska-Śmiałek, Biernacka-Fijałkowska, Rudnicka-Sosin, Wypasek, Kozanecki, Dziewięcka, Faltyn, Karabinowska, Khachatryan, Hlawaty, Leśniak-Sobelga, Kostkiewicz, Płazak, Podolec: "Left ventricular reverse remodeling is not related to biopsy-detected extracellular matrix fibrosis and serum markers of fibrosis in dilated cardiomyopathy, regardless of the definition used for LVRR." in: **Heart and vessels**, Vol. 32, Issue 6, pp. 714-725, (2016) (PubMed).

There are more publications referencing this product on: Product page



ELISA

Image 1. Human IL-2 PicoKine ELISA Kit standard curve