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# **IL-13 ELISA Kit**

1	Image
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**Publications** 



### Overview

Quantity:	96 tests
Target:	IL-13 (IL13)
Binding Specificity:	AA 19-131
Reactivity:	Rat
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 Rat IL-13
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: T19-H131
Specificity:	Expression system for standard: E.coli
	Immunogen sequence: T19-H131
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-13 (IL13)
Alternative Name:	IL13 (IL13 Products)
Background:	Protein Function: Cytokine. Inhibits inflammatory cytokine production. Synergizes with IL2 in
	regulating interferon-gamma synthesis. May be critical in regulating inflammatory and immune
	responses (By similarity)
	Background: Interleukin 13(IL-13) is a protein that in humans is encoded by the IL13 gene. IL-13
	is cytokine secreted by many cell types, but especially T helper type 2(Th2) cells, that is an
	important mediator of allergic inflammation and disease. IL-13 induces its effects through a
	multi-subunit receptor that includes the alpha chain of the IL-4 receptor(IL-4Ralpha) and at least
	one of two known IL-13-specific binding chains. Most of the biological effects of IL-13, like
	those of IL-4, are linked to a single transcription factor, signal transducer and activator of
	transcription 6(STAT6). The IL13 gene is clustered with IL3, IL5, IL4, and CSF2 on 5q. Physical
	maps of the 5q23-q31 region show the following order: cenIL3CSF2IL13IL4IL5tel, with
	IL13 particularly close to IL4.
	Synonyms: Interleukin-13,IL-13,T-cell activation protein P600,II13,II-13,
	Full Gene Name: Interleukin-13
	Cellular Localisation: Secreted.
Gene ID:	116553
UniProt:	P42203
Pathways:	JAK-STAT Signaling, Positive Regulation of Immune Effector Process, Production of Molecular
	Mediator of Immune Response, Proton Transport
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.

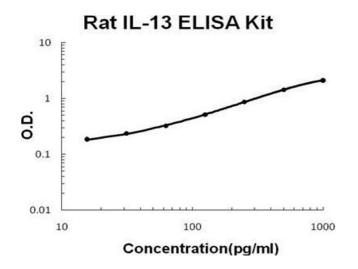
# **Application Details**

Plate:	Pre-coated Pre-coated
Protocol:	rat IL-13 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay
	technology. A monoclonal antibody from mouse specific for IL-13 has been precoated onto 96
	well plates. Standards(E.coli, T19-H131) and test samples are added to the wells, a biotinylated
	detection polyclonal antibody from goat specific for IL-13 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 rat IL-13 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 rat IL-13 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 rat cell culture supernates, serum or plasma(heparin, EDTA) to each
	empty well. See "Sample Dilution Guideline" above for details. It is recommended that each rat
	IL-13 standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 174, Standard deviation: 7.66, CV(%): 4.4
	• Sample 2: n=16, Mean(pg/ml): 396, Standard deviation: 24.95, CV(%): 6.3
	• Sample 3: n=16, Mean(pg/ml): 648, Standard deviation: 35, CV(%): 5.4,
	<ul> <li>Sample 1: n=24, Mean(pg/ml): 284, Standard deviation: 14.77, CV(%): 5.2</li> <li>Sample 2: n=24, Mean(pg/ml): 520, Standard deviation: 39, CV(%): 7.5</li> </ul>
	• Sample 3: n=24, Mean(pg/ml): 706, Standard deviation: 46.6, CV(%): 6.6
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:	Song, Li, Liang, Dai, Shen, Gong, Wang, Hu, Wang: "Low-level laser facilitates alternatively
	activated macrophage/microglia polarization and promotes functional recovery after crush

spinal cord injury in rats." in: Scientific reports, Vol. 7, Issue 1, pp. 620, (2017) (PubMed).

Huang, Ng, Chen, Lin, Tang, Cheng, Yang, Jiang: "Inhibition of TRPM7 channels reduces degranulation and release of cytokines in rat bone marrow-derived mast cells." in: **International journal of molecular sciences**, Vol. 15, Issue 7, pp. 11817-31, (2015) (PubMed).

## **Images**



### **ELISA**

Image 1. Rat IL-13 PicoKine ELISA Kit standard curve