Datasheet for ABIN1672844

IL-33 ELISA Kit

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Overview

Quantity:	96 tests
Target:	IL-33 (IL33)
Binding Specificity:	AA 109-266
Reactivity:	Mouse
Method Type:	Sandwich ELISA
Detection Range:	31.2-2000 pg/mL
Minimum Detection Limit:	31.2 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Mouse IL-33
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: S109-I266
Specificity:	Expression system for standard: E.coli Immunogen sequence: S109-I266
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:	IL-33 (IL33)
Alternative Name:	IL33 (IL33 Products)
Background:	Protein Function: Cytokine that binds to and signals through the IL1RL1/ST2 receptor which in turn activates NF-kappa-B and MAPK signaling pathways in target cells. Involved in the maturation of Th2 cells inducing the secretion of T-helper type 2-associated cytokines. Also involved in activation of mast cells, basophils, eosinophils and natural killer cells. Acts as a chemoattractant for Th2 cells, and may function as an "alarmin", that amplifies immune responses during tissue injury. Background: Interleukin 33(IL-33) is a cytokine belonging to the IL-1 superfamily. By genomic sequence analysis, the IL33 gene is mapped to chromosome 9p24.1 and its mouse homolog to a syntenic region on chromosome 19qC1. The induction of type 2 cytokines by IL-33 in vivo is believed to induce the severe pathological changes observed in mucosal organs following administration of IL-33. IL33, an alarmin released from necrotic cells, is necessary for potent CD8 + T cell(CTL) responses to replicating, prototypic RNA, and DNA viruses in mice. IL33 prevented the downregulation of CXCR2 and inhibition of chemotaxis induced by activation of TLR4, and found that IL33 reverses the TLR4-induced reduction of CXCR2 expression via the inhibition of expression of GRK2. Synonyms: Interleukin-33,IL-33,Interleukin-33(102-266),Interleukin-33(109-266),Il33, Full Gene Name: Interleukin-33 Cellular Localisation: Nucleus. Chromosome. Cytoplasmic vesicle, secretory vesicle . Secreted. Associates with heterochromatin and mitotic chromosomes. Translocation from the nucleus occurs upon biomechanical strain, depends on an intact microtubule network, and is ATP-dependent (By similarity)..
Gene ID:	77125
UniProt:	Q8BVZ5
Pathways:	Production of Molecular Mediator of Immune Response

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:	mouse IL-33 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for IL-33 has been precoated onto 96-well plates. Standards(E.coli, S109-I266) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for IL-33 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-33 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 2000pg/mL, 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL mouse IL-33 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) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each mouse IL-33 standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 118, Standard deviation: 8.38, CV(%): 7.1 • Sample 2: n=16, Mean(pg/ml): 547, Standard deviation: 32.82, CV(%): 6 • Sample 3: n=16, Mean(pg/ml): 1240, Standard deviation: 68.2, CV(%): 5.5, • Sample 1: n=24, Mean(pg/ml): 245, Standard deviation: 18.13, CV(%): 7.4 • Sample 2: n=24, Mean(pg/ml): 644, Standard deviation: 39.93, CV(%): 6.2 • Sample 3: n=24, Mean(pg/ml): 1435, Standard deviation: 83.23, CV(%): 5.8
Restrictions:	For Research Use only

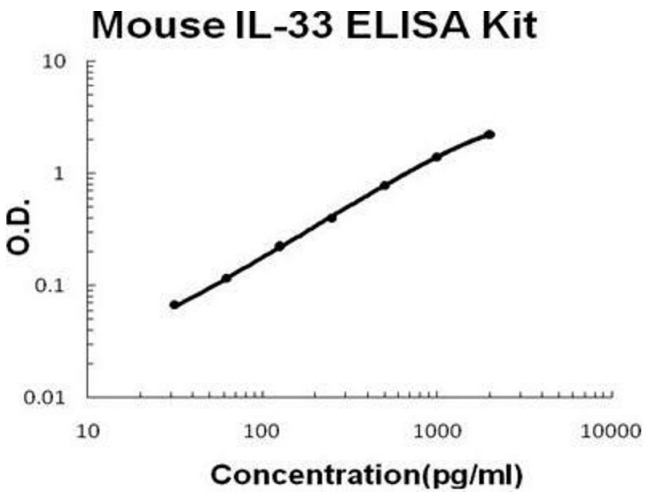
Handling

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:	Shen, Yang, Yang, Wang, Cui, Zhou, Liu, Pan, Liu, Zhang, Zhang, Xie, Liu: "Hepatitis B virus persistence in mice reveals IL-21 and IL-33 as regulators of viral clearance." in: **Nature communications**, Vol. 8, Issue 1, pp. 2119, (2017) (PubMed).

Images



ELISA

Image 1. Mouse IL-33 PicoKine ELISA Kit standard curve