Datasheet for ABIN1889299

CCL3 ELISA Kit

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Overview

Quantity:	96 tests
Target:	CCL3
Binding Specificity:	AA 24-92
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 CCL3/MIP1 alpha
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: A24-A92
Specificity:	Expression system for standard: E.coli Immunogen sequence: A24-A92
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:	CCL3
Alternative Name:	CCL3 (CCL3 Products)
Background:	Protein Function: Monokine with inflammatory, pyrogenic and chemokinetic properties. Has a potent chemotactic activity for eosinophils. Binding to a high-affinity receptor activates calcium release in neutrophils. Background: Chemokine(C-C motif) ligand 3(CCL3), so known as Macrophage inflammatory protein-1alpha(MIP-1 alpha), is a protein that in humans is encoded by the CCL3 gene. It is a cytokine which belongs to the CC chemokine family that is involved in the acute inflammatory state in the recruitment and activation of polymorphonuclear leukocytes. This gene is mapped to 17q12. CCL3 plays a role in inflammatory responses through binding to the receptors CCR1, CCR4 and CCR5. It has been found that the activation of CCR5 by CCL3 directly and independently activates a G-protein signaling pathway through GNAI2 and a tyrosine phosphorylation signaling pathway through JAK2. Synonyms: C-C motif chemokine 3,Heparin-binding chemotaxis protein,L2G25B,Macrophage inflammatory protein 1-alpha,MIP-1-alpha,SIS-alpha,Small-inducible cytokine A3,TY-5,Ccl3,Mip1a, Scya3, Full Gene Name: C-C motif chemokine 3 Cellular Localisation: Secreted.
Gene ID:	20302
UniProt:	P10855
Pathways:	Cellular Response to Molecule of Bacterial Origin, Autophagy

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:	Tissue Specificity: Expressed in lung, spleen, and pancreas.
Plate:	Pre-coated
Protocol:	mouse CCL3 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for CCL3 has been precoated onto 96-well plates. Standards(E.coli, A24-A92) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for CCL3 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 CCL3 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 CCL3 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, citrate) to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each mouse CCL3 standard solution and each sample is measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 102, Standard deviation: 3.88, CV(%): 3.8 • Sample 2: n=16, Mean(pg/ml): 234, Standard deviation: 9.6, CV(%): 4.1 • Sample 3: n=16, Mean(pg/ml): 421, Standard deviation: 22.3, CV(%): 5.3, • Sample 1: n=24, Mean(pg/ml): 86, Standard deviation: 4.82, CV(%): 5.6 • Sample 2: n=24, Mean(pg/ml): 255, Standard deviation: 17, CV(%): 6.7 • Sample 3: n=24, Mean(pg/ml): 437, Standard deviation: 31, CV(%): 7.1
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:	Zhang, Shi, Zou, Chen, Tang, Ye, Liu: "High glucose stimulates cell proliferation and Collagen IV

Publications

production in rat mesangial cells through inhibiting AMPK-KATP signaling." in: **International urology and nephrology**, Vol. 49, Issue 11, pp. 2079-2086, (2018) (PubMed).

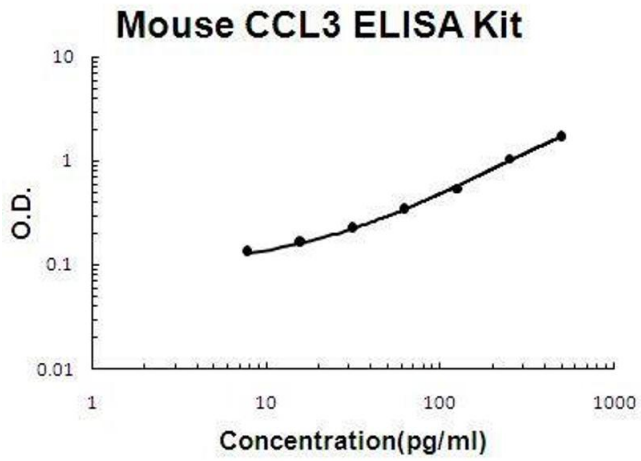
Gishto, Farrell, Kothapalli: "Tuning composition and architecture of biomimetic scaffolds for enhanced matrix synthesis by murine cardiomyocytes." in: **Journal of biomedical materials research. Part A**, Vol. 103, Issue 2, pp. 693-708, (2015) (PubMed).

Cavdar, Ozbal, Celik, Ergur, Guneli, Ural, Camsari, Guner: "The effects of alpha-lipoic acid on MMP-2 and MMP-9 activities in a rat renal ischemia and re-perfusion model." in: **Biotechnic & histochemistry : official publication of the Biological Stain Commission**, Vol. 89, Issue 4, pp. 304-14, (2014) (PubMed).

Xu, Ling, Zhu, Fan, Zhang: "The effect of 2,3,4',5-tetrahydroxystilbene-2-0-?-D glucoside on neointima formation in a rat artery balloon injury model and its possible mechanisms." in: **European journal of pharmacology**, Vol. 698, Issue 1-3, pp. 370-8, (2013) (PubMed).

Kim, Lee, Choi, Yoo, Yang: "Implication of MMP-9 and urokinase plasminogen activator (uPA) in the activation of pro-matrix metalloproteinase (MMP)-13." in: **Rheumatology international**, Vol. 32, Issue 10, pp. 3069-75, (2012) (PubMed).

Images



ELISA

Image 1. Mouse CCL3/MIP1 alpha PicoKine ELISA Kit standard curve