

Datasheet for ABIN411320

CCL2 ELISA Kit



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Overview

Quantity: 96 tests

Target: CCL2

Binding Specificity: AA 24-99

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 MCP-1

Brand: PicoKine™

Sample Type: Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Plasma (citrate), Urine

Analytical Method: Quantitative

Detection Method: Colorimetric

Immunogen: Expression system for standard: E.coli
Immunogen sequence: Q24-T99

Specificity: Expression system for standard: E.coli
Immunogen sequence: Q24-T99

Cross-Reactivity (Details): There is cross-reactivity with human Eotaxin, MCP-3<1 % .

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:	CCL2
Alternative Name:	CCL2 (CCL2 Products)
Background:	<p>Protein Function: Chemotactic factor that attracts monocytes and basophils but not neutrophils or eosinophils. Augments monocyte anti-tumor activity. Has been implicated in the pathogenesis of diseases characterized by monocytic infiltrates, like psoriasis, rheumatoid arthritis or atherosclerosis. May be involved in the recruitment of monocytes into the arterial wall during the disease process of atherosclerosis.</p> <p>Background: Monocyte chemoattractant protein-1(MCP-1), a member of the chemokine(chemotactic cytokine) family, is a potent monocyte agonist that is upregulated by oxidized lipids. MCP-1 is also known as CCL2, SCYA2, MCAF. MCAF is a member of family of factors involved in immune and inflammatory responses. The amino acid sequence deduced from the nucleotide sequence reveals the primary structure of the MCAF precursor to be composed of a putative signal peptide sequence of 23 amino acid residues and a mature MCAF sequence of 76 amino acid residues. MCP-1 plays a unique and crucial role in the initiation of atherosclerosis and may provide a new therapeutic target in this disorder. Human MCP-1 is a 8.7KDa non-glycoprotein, consisting of 99 amino acids in precursor form and 76 amino acids in mature form.</p> <p>Synonyms: C-C motif chemokine 2,HC11,Monocyte chemoattractant protein 1,Monocyte chemotactic and activating factor,MCAF,Monocyte chemotactic protein 1,MCP-1,Monocyte secretory protein JE,Small-inducible cytokine A2,CCL2,MCP1, SCYA2,</p> <p>Full Gene Name: C-C motif chemokine 2</p> <p>Cellular Localisation: Secreted.</p>
Gene ID:	6347
UniProt:	P13500
Pathways:	Cellular Response to Molecule of Bacterial Origin , Positive Regulation of Immune Effector Process , ER-Nucleus Signaling , Unfolded Protein Response , The Global Phosphorylation

Target Details

Landscape of SARS-CoV-2 Infection

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.
Comment:	Sequence similarities: Belongs to the intercrine beta (chemokine CC) family.
Plate:	Pre-coated
Protocol:	human MCP-1 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for MCP-1 has been precoated onto 96-well plates. Standards(E.coli, 24-T99) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for MCP-1 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 MCP-1 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 MCP-1 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, plasma(heparin, EDTA, citrate) or urine to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human MCP-1 standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 73, Standard deviation: 2.7, CV(%): 3.7• Sample 2: n=16, Mean(pg/ml): 362, Standard deviation: 17.74, CV(%): 4.9• Sample 3: n=16, Mean(pg/ml): 663, Standard deviation: 34.5, CV(%): 5.2,• Sample 1: n=24, Mean(pg/ml): 93, Standard deviation: 5.022, CV(%): 5.4• Sample 2: n=24, Mean(pg/ml): 397, Standard deviation: 24.22, CV(%): 6.1• Sample 3: n=24, Mean(pg/ml): 695, Standard deviation: 51.43, CV(%): 7.4
Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
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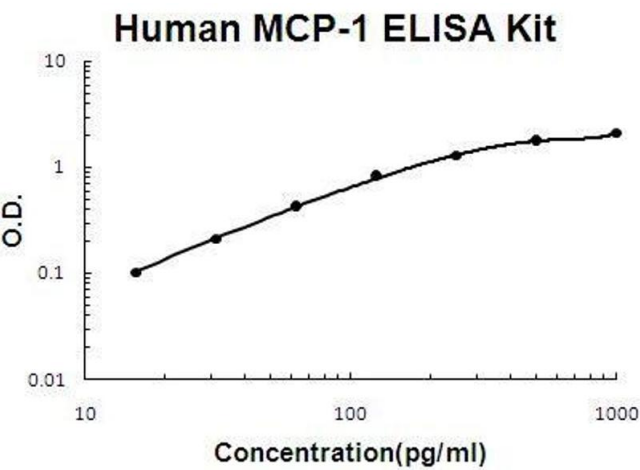
Handling

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:
- Namlı Kalem, Akgun, Kalem, Bakirarar, Celik: "Chemokine (C-C motif) ligand-2 (CCL2) and oxidative stress markers in recurrent pregnancy loss and repeated implantation failure." in: **Journal of assisted reproduction and genetics**, Vol. 34, Issue 11, pp. 1501-1506, (2018) ([PubMed](#)).
- Sun, Chen, Wang, Wan, Zhang, Zhang, Lin, Zhang: "Salusin-β Is Involved in Diabetes Mellitus-Induced Endothelial Dysfunction via Degradation of Peroxisome Proliferator-Activated Receptor Gamma." in: **Oxidative medicine and cellular longevity**, Vol. 2017, pp. 6905217, (2018) ([PubMed](#)).
- Capistrano, Meneses, de Oliveira Neves, de Almeida Leitão, Martins, Libório: "Renal Evaluation in Common Variable Immunodeficiency." in: **Journal of immunology research**, Vol. 2018, pp. 5841031, (2018) ([PubMed](#)).
- Blanchard, Stepanovska, Starck, Erhardt, Römer, Meyer Zu Heringdorf, Pfeilschifter, Zangemeister-Wittke, Huwiler: "Downregulation of the S1P Transporter Spinster Homology Protein 2 (Spns2) Exerts an Anti-Fibrotic and Anti-Inflammatory Effect in Human Renal Proximal Tubular Epithelial Cells." in: **International journal of molecular sciences**, Vol. 19, Issue 5, (2018) ([PubMed](#)).
- Liao, Cai, Xu, Wang, Qiu, Xie, Huang, Sui: "Protective Role of Antioxidant Huskless Barley Extracts on TNF-α-Induced Endothelial Dysfunction in Human Vascular Endothelial Cells." in: **Oxidative medicine and cellular longevity**, Vol. 2018, pp. 3846029, (2018) ([PubMed](#)).

There are more publications referencing this product on: [Product page](#)



ELISA

Image 1. Human MCP-1 PicoKine ELISA Kit standard curve