

Datasheet for ABIN1672827

CCL2 ELISA Kit**1** Image**23** Publications[Go to Product page](#)

Overview

Quantity:	96 tests
Target:	CCL2
Binding Specificity:	AA 24-148
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 MCP-1/CCL2
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: Q24-N148
Specificity:	Expression system for standard: NSO Immunogen sequence: Q24-N148
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: CCL2

Alternative Name: CCL2 ([CCL2 Products](#))

Background: Protein Function: Chemotactic factor that attracts monocytes, but not neutrophils.
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.¹ 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.² MCP-1 plays a unique and crucial role in the initiation of atherosclerosis and may provide a new therapeutic target in this disorder.³
Synonyms: C-C motif chemokine 2,Immediate-early serum-responsive protein JE,Monocyte chemoattractant protein 1,Monocyte chemotactic protein 1,MCP-1,Small-inducible cytokine A2,Ccl2,Je, Mcp1, Scya2,
Full Gene Name: C-C motif chemokine 2
Cellular Localisation: Secreted.

Gene ID: 24770

UniProt: [P14844](#)

Pathways: [Cellular Response to Molecule of Bacterial Origin](#), [Positive Regulation of Immune Effector Process](#), [ER-Nucleus Signaling](#), [Unfolded Protein Response](#), [The Global Phosphorylation 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.

Application Details

Plate:	Pre-coated
Protocol:	rat MCP-1 ELISA Kit is 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(NSO, Q24-N148) 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 is added and unbound conjugates are washed away with PBS or TBS buffer. HRP substrate TMB are used to visualize HRP enzymatic reaction. TMB is 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 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 rat 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 rat cell culture supernates or serum to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each rat 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): 87, Standard deviation: 3.306, CV(%): 3.8• Sample 2: n=16, Mean(pg/ml): 318, Standard deviation: 16.54, CV(%): 5.2• Sample 3: n=16, Mean(pg/ml): 627, Standard deviation: 36.4, CV(%): 5.8,• Sample 1: n=24, Mean(pg/ml): 98, Standard deviation: 4.802, CV(%): 4.9• Sample 2: n=24, Mean(pg/ml): 346, Standard deviation: 18.34, CV(%): 5.3• Sample 3: n=24, Mean(pg/ml): 683, Standard deviation: 42.35, CV(%): 6.2
Restrictions:	For Research Use only

Handling

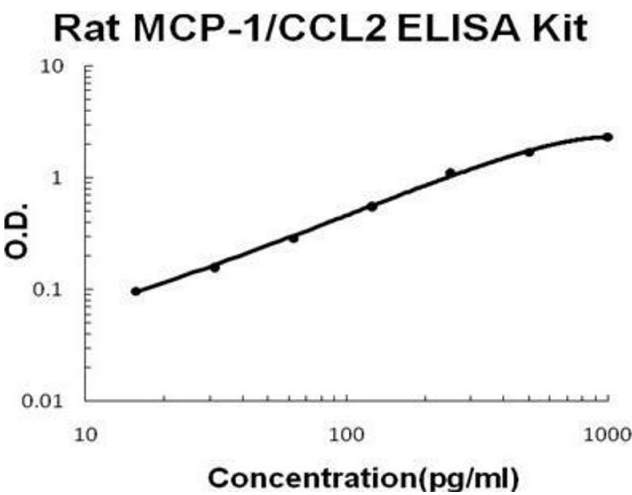
Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C, 4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

Publications

Product cited in:	Benli, Ayyildiz, Cirrik, Kocktürk, Cirakoglu, Noyan, Ayyildiz, Germiyanoglu: "The effect of tadalafil therapy on kidney damage caused by sepsis in a polymicrobial septic model induced in rats: a
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biochemical and histopathological study." in: **International braz j urol : official journal of the Brazilian Society of Urology**, Vol. 43, Issue 2, pp. 345-355, (2017) ([PubMed](#)).

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



ELISA

Image 1. Rat MCP-1/CCL2 PicoKine ELISA Kit standard curve