

## Recombinant Rat Monocyte Chemotactic Protein-1 (CCL2)

**Alternate names:** CCL2, MCP1

**Catalog No.:** PA1158XC

**Quantity:** 1 mg

**Concentration:** 1 mg/ml

**Species:** Rat

**Source:** E. coli, E.coli

**Format:** **State:** Sterile Filtered White lyophilized (freeze-dried) powder.

**Purity:** >95% Greater than 95.0% as determined by:

(a) Analysis by RP-HPLC.

(b) Anion-exchange FPLC.

(c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained.

**Buffer System:** Recombinant MCP-1 was lyophilized from a concentrated sterile solution containing no additives.

**Endotoxin Level:** Less than 0.1 ng/μg (IEU/μg) of Rat Monocyte Chemotactic Protein-1.

**Dimers:** Less than 1% as determined by silver-stained SDS-PAGE gel analysis.

**Reconstitution:** It is recommended to reconstitute the lyophilized Rat MCP-1 in sterile 18MO-cm H<sub>2</sub>O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

**Description:** Recombinant Rat MCP-1 produced in E.Coli is a non-glycosylated, Polypeptide chain containing 125 amino acids. Rat Monocyte Chemotactic Protein-1 is purified by proprietary chromatographic techniques.

**AA Sequence:**

The sequence of the first five N-terminal amino acids was determined and was found to be Gln-Pro-Asp-Ala-Val.

**Biological Activity:** MCP-1 is fully biologically active when compared to standard. The specific activity as determined by the ability of Rat MCP-1 to chemoattract human peripheral blood at 10-100ng/ml.

Molecular weight: 14092 Dalton.

**Molecular weight:** 14 kDa

**Add. Information:** Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm .

2. Analysis by RP-HPLC, using a calibrated solution of Rat MCP-1 as a Reference Standard.

#### Storage:

Recombinant Monocyte Chemotactic Protein-1 although stable at room temperature for 3 weeks, should be stored desiccated below -18 C. Upon reconstitution Monocyte Chemotactic Protein-1 should be stored at 4 C between 2-7 days and for future use below -18 C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid freeze-thaw cycles.

#### General Readings:

1. Mitomycin C upregulates IL-8 and MCP-1 chemokine expression via mitogen-activated protein kinases in corneal fibroblasts. Invest Ophthalmol Vis Sci 2007 May;48(5):2009-16
2. Elevated ICAM-1 and MCP-1 plasma levels in subjects at high cardiovascular risk are diminished by atorvastatin treatment. Atorvastatin on Inflammatory Markers study: a substudy of Achieve Cholesterol Targets Fast with Atorvastatin Stratified Titration. Am Heart J 2007 May;153(5):881-8
3. Inhibition of migration of monocytes and granulocytes in vivo by the peptide corresponding to sequence 65-76 of monocyte chemotactic protein-1 (MCP-1). Dokl Biochem Biophys 2006 Nov-Dec;411:339-41
4. Elevated white blood cell count, CRP and fibrinogen levels are not associated with increased anti-endothelial and anti-ox-LDL antibody, MCP-1, and RANTES levels in early onset occlusive carotid artery disease. Cytokine 2007 Jan;37(1):44-50
5. Coxiella burnetii stimulates production of RANTES and MCP-1 by mononuclear cells: modulation by adhesion to endothelial cells and its implication in Q fever. Eur Cytokine Netw 2006 Dec;17(4):253-9
6. Changes in serum and ascitic monocyte chemotactic protein-1 (MCP-1) and IL-10 levels in cirrhotic patients with spontaneous bacterial peritonitis. J Interferon Cytokine Res 2007 Mar;27(3):227-30

#### Pictures:

PA1158XCME0607

