

Recombinant Rat Chemokine (C-C Motif) Ligand 2

Cat. No. Ccl2-55R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Monocyte Chemotactic Protein-1 produced in E.Coli is a non-glycosylated, Polypeptide chain containing 125 amino acids and having a molecular mass of 14092 Dalton. The MCP-1 is purified by proprietary chromatographic techniques.
Species	Rat
Source	E.coli
Description	Chemokine (C-C motif) ligand 2 (CCL2) is a small cytokine belonging to the CC chemokine family that is also known as monocyte chemotactic protein-1 (MCP-1). It is found at the site of tooth eruption and bone degradation. In the bone, CCL2 is expressed by mature osteoclasts and osteoblasts and is under the control of nuclear factor κ B (NF κ B). CCL2 recruits immune cells, such as monocytes, to sites of tissue injury and infection. This chemokine is produced as a protein precursor containing signal peptide of 23 amino acids and a mature peptide of 76 amino acids. It is a monomeric polypeptide, with a molecular weight of approximately 13 kDa.
Amino Acid Sequence	The sequence of the first five N-terminal amino acids was determined and was found to be Gln-Pro-Asp-Ala-Val.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 97.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Formulation	The protein was lyophilized from a concentrated (1mg/ml) sterile solution containing no additives.
Solubility	It is recommended to reconstitute the lyophilized Monocyte Chemotactic Protein-1 in sterile 18 MΩ-cm H ₂ O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.
Specific Activity	The Biological activity is calculated by its ability to chemoattract total rat neutrophils cells using 10.0-100.0 ng/ml.
Stability	Lyophilized MCP-1 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution CCL2 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 prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	Ccl2 chemokine (C-C motif) ligand 2 [Rattus norvegicus]
Synonyms	Ccl2; chemokine (C-C motif) ligand 2; MCP-1; Scya2; Sigje; monocyte chemotactic protein 1; small inducible cytokine A2; monocyte chemoattractant protein-1; Small inducible gene JE
Gene ID	24770
mRNA Refseq	NM_031530
Protein Refseq	NP_113718
MIM	112266

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UniProt ID	P14844
Chromosome Location	10q26
Pathway	Chemokine signaling pathway; Cytokine-cytokine receptor interaction
Function	CCR2 chemokine receptor binding; G-protein-coupled receptor binding; heparin binding; protein binding

