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 κB (NFκB). 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.

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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 H2O 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℃. Upon reconstitution CCL2 should be stored at 4℃between 2-7 days and for future use below -18℃. 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
	

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