

## 32-1935: rMCP 1 Recombinant Protein

### Alternative Name :

Small inducible cytokine A2,CCL2,Monocyte chemotactic protein 1,MCP-1,Monocyte chemoattractant protein 1,Monocyte chemotactic and activating factor,MCAF,Monocyte secretory protein 1E,HC11,chemokine (C-C motif) ligand 2,MCPI,SCYA2,GDCF-2,

### Description

Source : Escherichia Coli. Monocyte Chemotactic Protein-1 Rat Recombinant produced in E.Coli is a non-glycosylated, Polypeptide chain containing 125 amino acids and having a molecular mass of 14.1 kDa. The MCP-1 is purified by proprietary chromatographic techniques. 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 B (NFB). 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 13kDa. As with many other CC chemokines, CCL2 is located on chromosome 17 in humans. The cell surface receptors that bind CCL2 are CCR2 and CCR5.

### Product Info

**Amount :** 10 µg

**Purification :** Greater than 98.0% as determined by SDS-PAGE.

**Content :** The protein was lyophilized from a concentrated (1mg/ml) sterile solution containing no additives.

**Storage condition :** 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 it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

**Amino Acid :** QPDAVNAPLT CCYSFTGKMI PMSRLENYKR ITSSRCPKEA VVFVTKLKRE ICADPNKEWV QKYIRKLDQN QVRSETTVFY KIASLRTSA PLNVNLTHKS EANASTLFST TTSSTSVEVT SMTEN.

### Application Note

It is recommended to reconstitute the lyophilized Monocyte Chemotactic Protein-1 in sterile 18MΩ-cm H<sub>2</sub>O not less than 100µg/ml, which can then be further diluted to other aqueous solutions. ED<sub>50</sub> =1-10ng/ml corresponding to a Specific Activity of 100,000-1,000,000IU/mg. The biological activity was determined by measuring the dose dependent chemotaxis with human THP-1 cells. The optimal concentration should be determined for each specific application by an initial dose-response assay.

