

## MCP 1 Human

**Description:** Monocyte Chemotactic Protein-1 Human Recombinant also known as Monocyte Chemotactic and Activating Factor (MCAF) produced in E.Coli is a non-glycosylated, Polypeptide chain containing 76 amino acids and having a molecular mass of 8607 Dalton. The MCP-1 is purified by proprietary chromatographic techniques.

**Synonyms:** Small inducible cytokine A2, CCL2, Monocyte chemotactic protein 1, MCP-1, Monocyte chemoattractant protein 1, Monocyte chemotactic and activating factor, MCAF, Monocyte secretory protein JE, HC11, chemokine (C-C motif) ligand 2, MCP1, SCYA2, GDCF-2, SMC-C

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile Filtered White lyophilized (freeze-dried) powder.

**Amino Acid Sequence:** The sequence of the first five N-terminal amino acids was determined and was found to be Gln-Pro-Asp-Ala-Ile.

**Purity:** Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

**Formulation:**

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

**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.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Solubility:**

It is recommended to reconstitute the lyophilized Monocyte Chemotactic Protein-1 in sterile 18M-cm H<sub>2</sub>O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

**Introduction:**

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.

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**Biological Activity:**

The specific activity as determined by the ability of MCP-1 to chemoattract human Monocytes using a concentration of 5-20 ng/ml corresponding to a Specific Activity of 50,000-200,000IU/mg.

Catalog #:CHPS-278

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