

# Recombinant Murine Monocyte Chemotactic Protein-1 (rm CCL2 / rm MCP-1)

**Synonyms:** Small inducible cytokine A2, CCL2, Monocyte chemoattractant protein 1, Monocyte chemotactic and activating factor, MCAF, Platelet-derived growth factor-inducible protein JE.

**Introduction:** MCP-1 is a small cytokine belonging to the CC chemokine family. It is found at the site of tooth eruption and bone degradation. In the bone MCP-1 is expressed by mature osteoclasts and osteoblasts and is under the control of nuclear factor  $\kappa$ B (NF $\kappa$ B). MCP-1 recruits immune cells, such as monocytes, to sites of tissue injury and infection. It 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 MCP-1 is located on chromosome 17 in humans. The cell surface receptors that bind MCP-1 are CCR2 and CCR5.

**Description:** Recombinant murine MCP-1 produced in *E.Coli* is a single non-glycosylated, polypeptide chain containing 125 amino acids and having a molecular mass of 14 kDa. The rm MCP-1 is purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*.

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:** Lyophilized with no additives.

**Solubility:** It is recommended to reconstitute the lyophilized rm MCP-1 in sterile 18M $\Omega$ -cm H<sub>2</sub>O not less than 100  $\mu$ g/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rm MCP-1 although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rm MCP-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 prevent freeze-thaw cycles.

**Purity:** Greater than 95.0% as determined by SDS-PAGE.

**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.

**Endotoxicity:** The endotoxin level is less than 1 EU /  $\mu$ g determined by LAL method.

**Biological Activity:** The biological activity was determined by calculating its ability to chemoattract Balb/C mouse spleen MNCs at 1.0 - 20.0 ng/ml.

This material is offered for **research only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	2 $\mu$ g	Cat.N°	12343382
<i>medium</i>	10 $\mu$ g	Cat.N°	12343383
<i>large</i>	50 $\mu$ g	Cat.N°	12343385
<i>x-large</i>	250 $\mu$ g	Cat.N°	12343387
<i>xx-large</i>	1000 $\mu$ g	Cat.N°	12343388

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Gladiolenweg 2; 26169 Friesoythe; Germany  
phone: +49-(0)4491-400997, fax: +49-(0)4491-400998, [info@immunotools.com](mailto:info@immunotools.com)  
[www.immunotools.com](http://www.immunotools.com)