

Recombinant Human Monocyte Chemotactic Protein-1 (rh MCP-1 / CCL2)

Synonyms: Small inducible cytokine A2, 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 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 MCP-1 is expressed by mature osteoclasts and osteoblasts and is under the control of nuclear factor κ B (NF κ 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 human MCP-1 produced in *E.Coli* is a non-glycosylated polypeptide chain containing 76 amino acids and having a molecular mass of 8607 Dalton. The rh MCP-1 is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

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

Formulation: Lyophilized from a 0.22 μ m filtered solution in 25 mM sodium phosphate, 400 mM NaCl, pH 7.4. The aliquots/samples of 1 μ g contain Trehalose 5% (w/vol) for better recovery.

Solubility: It is recommended to reconstitute the lyophilized rh MCP-1 in sterile H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rh MCP-1 although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rh 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: QPDAINAPVT CCYNFTNRKI SVQRLASYRR ITSSKCPKEA VIFKTIVAKE
ICADPKQKWV QDSMDHLDKQ TQTPKT

Endotoxicity: The endotoxin level is less than 1 EU / μ g determined by LAL method.

Biological Activity: rh MCP-1 is fully biologically active when compared to standard. The specific activity as determined by the ability of MCP-1 to chemoattract human monocytes using a concentration of 5-20 ng/ml.

This material is offered for **research use 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>	5 μ g	Cat.N°	11343380
<i>medium</i>	20 μ g	Cat.N°	11343384
<i>large</i>	100 μ g	Cat.N°	11343386
<i>x-large</i>	500 μ g	Cat.N°	11343387

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