

DATASHEET
Version 20181206**MCP-1/MCAF/CCL2, Human****Cat. No.:** Z02829-1**Size:** 1.0 mg**Synonyms:** MCP-1/MCAF/CCL2, Human;**Description:**

CCL2, also known as monocyte chemoattractant and activating factor (MCAF), was initially purified independently by two groups based on its ability to chemoattract monocytes. Subsequent to its cloning and sequencing, it became evident that this protein is also identical to the product of the human JE gene. The JE gene, originally identified in mouse fibroblasts, is a platelet-derived growth factor (PDGF)-inducible gene. The human CCL2 cDNA encodes a 99 amino acid residue precursor protein with a 23 residue hydrophobic signal peptide that is cleaved to generate the 76 residue mature protein. Natural CCL2 is heterogeneous in size due to the addition of O-linked carbohydrates and sialic acid residues. In addition to fibroblasts, tumor cells, smooth muscle cells, endothelial cells, and mononuclear phagocytes can also produce CCL2 either constitutively or upon stimulation by various stimuli. CCL2 is a member of the β (CC) subfamily of chemokines. Recently, the existence of MCP2 and MCP3 with 62% and 73% amino acid identity respectively, to CCL2 have been reported.

Amino Acid Sequence:

00001 QPDAINAPVT CCYNFTNRKI SVQRLASYRR ITSSKCPKEA
00041 VIFKTIVAKE ICADPKQKWV QDSMDHLDKQ TQTPKT

Source: *E. coli***Species:** Human

Biological Activity: Fully biologically active when compared to standard. The biological activity determined by a chemotaxis bioassay using human monocytes is in a concentration range of 10-100 ng/ml.

Molecular Weight: Approximately 8.7 kDa, a single non-glycosylated polypeptide chain containing 76 amino acids.

Formulation: Lyophilized from a 0.2 μ m filtered concentrated solution in 20 mM PB, pH 7.4, 100 mM NaCl.

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

Reconstitution: We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Purity: > 96 % by SDS-PAGE and HPLC analyses.

Endotoxin Level: Less than 1 EU/ μ g of rHuMCP-1/CCL2 as determined by LAL method.

Storage: This lyophilized preparation is stable at 2-8 °C, but should be kept at -20 °C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 °C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 °C to -70 °C. Avoid repeated freeze/thaw cycles.