

## Active Human CCL2

**Cat. No.** CCL2-108H    **Lot. No.** (See product label)

### SPECIFICATION

**Product Overview**      It is a synthetic Protein

**Species**                      Human

**Description**

Monocyte chemotactic protein (MCP-1) is also known as monocyte chemotactic and activating factor (MCAF). It is the product of the human JE gene. The precursor form of MCP-1 consists of 99 amino acids with a signal peptide sequence consisting of 23 amino-terminal amino acids. The mature form of MCP-1 has 4 cysteine residues. The first two cysteine residues are in an adjacent position C-C, which characterizes MCP-1 as a member of the chemokine subfamily. MCP-1 is a nonglycosylated protein consisting of 76 amino acids with a molecular weight of 8700 daltons. MCP-1 mRNA expression can be induced in monocytes/macrophages, B lymphocytes, endothelial cells and astrocytoma cells by LPS. IL-1 will induce production of MCP-1 in fibroblasts, keratinocytes, hepatoma cells, and Type II pneumocytes. In vitro, MCP-1 will act on monocytes to initiate chemotaxis, induce superoxide anion release, induce the release of lysosomal enzymes and augment cytostatic activity. In vivo, MCP-1 will induce macrophage infiltration. The MCP-1 gene contains potential binding sites for several transcription factors, including AP-1, AP-2, NF-κB, and NF-IL6.

**Form**                              Lyophilized

**Bio-activity**

Activity of this protein measured by its monocyte chemotactic activity and its ability to chemoattract CCR2A transfected mouse cells. ED50 for these assays were within the range of 10-30 ng/ml and 15-70 ng/ml.

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<b>Applications</b>	Activity Assay
<b>Storage</b>	Product should be stored at -20°C. Aliquot to avoid freeze/thaw cycles
<b>Reconstitution</b>	Recommended reconstitution in sterile phosphate buffered saline which contains at least 0.1% human or bovine serum albumin to prepare a stocksolution of no less than 20 µg/ml and vortex thoroughly.
<b>GENE INFORMATION</b>	
<b>Gene Name</b>	<a href="#">CCL2 chemokine (C-C motif) ligand 2 [ Homo sapiens ]</a>
<b>Official Symbol</b>	CCL2
<b>Synonyms</b>	CCL2; chemokine (C-C motif) ligand 2; SCYA2, small inducible cytokine A2 (monocyte chemotactic protein 1, homologous to mouse Sig je); C-C motif chemokine 2; GDCF 2; HC11; MCAF; MCP 1; MCP1; MGC9434; monocyte chemoattractant protein 1; monocyte chemotactic and activating factor; monocyte chemotactic protein 1; homologous to mouse Sig je; monocyte secretory protein JE; small inducible cytokine subfamily A (Cys Cys); member 2; SMC CF; small-inducible cytokine A2; monocyte chemoattractant protein-1; small inducible cytokine subfamily A (Cys-Cys), member 2; small inducible cytokine A2 (monocyte chemotactic protein 1, homologous to mouse Sig-je); MCP-1; SCYA2; GDCF-2; SMC-CF; HSMCR30;
<b>Gene ID</b>	<a href="#">6347</a>
<b>mRNA Refseq</b>	<a href="#">NM_002982</a>
<b>Protein Refseq</b>	<a href="#">NP_002973</a>
<b>UniProt ID</b>	<a href="#">P13500</a>

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**Chromosome  
Location**

17q11.2-q21.1

**Pathway**

Activation of Genes by ATF4, organism-specific biosystem; Chagas disease (American trypanosomiasis), organism-specific biosystem; Chagas disease (American trypanosomiasis), conserved biosystem; Chemokine receptors bind chemokines, organism-specific biosystem; Chemokine signaling pathway, organism-specific biosystem; Chemokine signaling pathway, conserved biosystem; Class A/1 (Rhodopsin-like receptors), organism-specific biosystem;

**Function**

CCR2 chemokine receptor binding; CCR2 chemokine receptor binding; G-protein coupled receptor binding; chemokine activity; heparin binding; protein kinase activity; receptor binding;

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