

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-kB, 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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Applications	Activity Assay
Storage	Product should be stored at -20°C. Aliquot to avoid freeze/thaw cycles
Reconstitution	Recommended reconstitution in sterile phosphate buffered saline which contains at least 0.1% human or bovine serum albumin to prepare a stock solution of no less than 20 µg/ml and vortex thoroughly.
GENE INFORMATION	
Gene Name	CCL2 chemokine (C-C motif) ligand 2 [Homo sapiens]
Official Symbol	CCL2
Synonyms	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;
Gene ID	6347
mRNA Refseq	NM_002982
Protein Refseq	NP_002973
UniProt ID	P13500

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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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