

Recombinant Human CCL2 protein

Cat. No. CCL2-281H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human CCL2 protein was expressed in Escherichia coli.
Species	Human
Source	E.coli
ProteinLength	76
Description	CCL2, also named monocyte chemotactic protein-1 (MCP-1) and small inducible cytokine A2, is a small cytokine that belongs to the CC chemokine family. It is a monomeric polypeptide, with a molecular weight of approximately 13 kDa and it is anchored in the plasma membrane of endothelial cells by glycosaminoglycan side chains of proteoglycans. Research shows that CCR2 and CCR4 are two cell surface receptors that bind CCL2. CCL2 exhibits a chemotactic activity for monocytes and basophils. However, it does not attract neutrophils or eosinophils. CCL2 has been implicated in the pathogenesis of diseases characterized by monocytic infiltrates, like psoriasis, rheumatoid arthritis or atherosclerosis and it may be involved in the recruitment of monocytes into the arterial wall during the disease process of atherosclerosis. Mature human CCL2 shares 78-79 % a.a. identity with canine, porcine and equine CCL2, while mouse and rat express a form of CCL2 that is extended by 49 a.a. and shares only ~56 % a.a. identity within the common region.
Form	Lyophilized from a 0.2µm filtered concentrated solution in 20 mM PB, pH 7.4, 100 mM NaCl.

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Bio-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 Mass	Approximately 8.7 kDa, a single non-glycosylated polypeptide chain containing 76 amino acids.
AA Sequence	QPDAINAPVTCCYNFTNRKISVQRLASYRRITSSKCPKEAVIFKTIVAKEICADPKQKW VQDSMDHLDKQTQTPKT
Endotoxin	Less than 1 EU/μg of rHuMCP-1/CCL2 as determined by LAL method.
Purity	>96% by SDS-PAGE and HPLC analysis.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
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 centigrade. Further dilutions should be made in appropriate buffered solutions.

GENE INFORMATION

Gene Name	CCL2
Official Symbol	CCL2

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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](#)

MIM

[158105](#)

UniProt ID

[P13500](#)

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