

# Recombinant Human CCL2

**Cat. No.** CCL2-78H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | A DNA sequence encoding the human MCP-1 protein sequence (containing the signal peptide sequence, and the mature human MCP-1 sequence) was expressed in modified human 293 cells.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Description</b>      | This gene is one of several cytokine genes clustered on the q-arm of chromosome 17. Chemokines are a superfamily of secreted proteins involved in immunoregulatory and inflammatory processes. The superfamily is divided into four subfamilies based on the arrangement of N-terminal cysteine residues of the mature peptide. This chemokine is a member of the CC subfamily which is characterized by two adjacent cysteine residues. This cytokine displays chemotactic activity for monocytes and basophils but not for neutrophils or eosinophils. It has been implicated in the pathogenesis of diseases characterized by monocytic infiltrates, like psoriasis, rheumatoid arthritis and atherosclerosis. It binds to chemokine receptors CCR2 and CCR4. |
| <b>Form</b>             | When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Molecular Mass</b>   | MCP-1 migrates as a band between 10 and 20 kDa in SDS-PAGE due to post-translation modifications, in particular glycosylation. This compares with the                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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|                       |                                                                                                                                                                                                                        |
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|                       | unmodified MCP- 1 that has a predicted molecular mass of 8.7kDa.                                                                                                                                                       |
| <b>AA Sequence</b>    | QPDAINAPVTCCYNFTNRKISVQRLASYRRITSSKCPKEAVIFKTIVAKEICADPKQKW<br>VQDSMDHLDKQTQTPK T                                                                                                                                      |
| <b>Purity</b>         | >95%, as determined by SDS-PAGE and visualized by silver stain.                                                                                                                                                        |
| <b>Storage</b>        | Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended, and longer-term storage of aliquots at -18 to -20°C. Repeated freeze thawing is not recommended. |
| <b>Reconstitution</b> | It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.                                                                                                                               |

## GENE INFORMATION

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|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | CCL2 chemokine (C-C motif) ligand 2 [ Homo sapiens (human) ]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Official Symbol</b> | CCL2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Synonyms</b>        | chemokine (C-C motif) ligand 2; HC11; MCAF; MCP1; MCP-1; SCYA2; GDCF-2; SMC-CF; HSMCR30; MGC9434; CCL2 17q11.2-q12; small inducible cytokine A2; monocyte secretory protein JE; monocyte chemoattractant protein-1; monocyte chemotactic and activating factor; small inducible cytokine subfamily A (Cys-Cys), member 2; monocyte chemotactic protein 1, homologous to mouse Sig-je; small inducible cytokine A2 (monocyte chemotactic protein 1, homologous to mouse Sig-je); MCAF; MCP1; Monocyte chemoattractant protein 1; Small-inducible cytokine A2; chemokine (C-C motif) ligand 2; small inducible cytokine A2 (monocyte chemotactic protein 1, homologous to mouse Sig-je) |
| <b>Gene ID</b>         | 6347                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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|----------------------------|------------------------------------------------------------------------------------------------------|
| <b>mRNA Refseq</b>         | NM_002982                                                                                            |
| <b>Protein Refseq</b>      | NP_002973                                                                                            |
| <b>MIM</b>                 | 158105                                                                                               |
| <b>UniProt ID</b>          | P13500                                                                                               |
| <b>Chromosome Location</b> | 17q11.2-q12                                                                                          |
| <b>Pathway</b>             | ATF4 activates genes; Chagas disease (American trypanosomiasis); Chemokine receptors bind chemokines |
| <b>Function</b>            | CCR2 chemokine receptor binding; chemokine activity; protein kinase activity                         |

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