

Rev04
Update: Mar,01,2022

DATASHEET

MCP-1/CCL2, Human

Cat. No.: Z03292

Product Introduction

Species	Human
Protein Construction	MCP-1 (Gln24-Thr99) Accession # P13500
Purity	> 95% as analyzed by SDS-PAGE
Endotoxin Level	< 0.2 EU/μg of protein by gel clotting method
Biological Activity	The EC ₅₀ value of human MCP-1/CCL2 on Ca ²⁺ mobilization assay in CHO-K1/Gα15/hCCR2 cells (human Gα15 and human CCR2 stably expressed in CHO-K1 cells) is less than 1.0 μg/ml.
Expression System	E. coli
Apparent Molecular Weight	~8.7 kDa, on SDS-PAGE under reducing conditions.
Formulation	Lyophilized after extensive dialysis against PBS.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH ₂ O or PBS up to 100 μg/ml.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Background

Target Background : 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.

Synonyms : MCAF; JE; Monocyte Chemotactic Protein-1; CCL2; MCP1

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