

## MCP-1/CCL2 Protein, Human, Recombinant (His & Avi), Biotinylated

### General Information

Synonyms:	SMC-CF;HC11;MCAF;MCP1;MCP-1;HSMCR30;C-C motif chemokine 2;GDCF-2;CCL2;SCYA2
Protein Construction:	Gln24-Thr99
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P13500
Molecular Weight:	11.5 kDa (predicted). Due to glycosylation, the protein migrates to 15-20 kDa based on Tris-Bis PAGE result.

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100  $\mu$ g/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Monocyte chemotactic protein-1 (MCP-1) (also referred to as chemokine (C-C motif) ligand 2 (CCL2)) is expressed by mainly inflammatory cells and endothelial cells. MCP-1 has been reported to play an important role in the pathogenesis of atherosclerosis and considerable evidence supports that the monocyte containing MCPs and macrophage influences the growth of other cell types within the atherosclerotic lesion. This review will focus on the general structure features of MCP-1 and its role in atherosclerosis.

Reference

Lin J, Kakkar V, Lu X. Impact of MCP-1 in atherosclerosis. Curr Pharm Des. 2014;20(28):4580-4588. doi:10.2174/1381612820666140522115801

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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481