

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

### General Information

Synonyms:	SCYA2;HC11;MCAF;HSMCR30;MCP-1;MCP1;GDCF-2;SMC-CF;chemokine (C-C motif) ligand 2
Protein Construction:	A DNA sequence encoding the human CCL2 (NP_002973.1) (Gln24-Thr99) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Gln 24
Species:	Human
Expression Host:	P. pastoris (Yeast)
Accession:	P13500
Molecular Weight:	10.1 kDa (predicted)

### QC Testing

Biological Activity:	Measured by its ability to chemoattract BaF3 mouse pro-B cells transfected with mouse CCR2. The ED50 for this effect is 20-200 ng/mL.
Purity:	> 95 % as determined by SDS-PAGE.
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

#### 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 chemoattractant protein 1 (MCP-1), also called CCL2, belongs to a group of CC chemokines located in chromosome 17q11.2. MCP-1 protein interacts with chemokine C-C motif receptor 2 (CCR2) to activate and recruit monocytes, macrophages, CD4+ T cells and immature dendritic cells to the site of infection. The presence of MCP-1 protein in an adequate concentration is important for granuloma formation and M. tuberculosis clearance. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

Reference

Vásquez-Loarte T, Trubnykova M, Guio H. Genetic association meta-analysis: a new classification to assess ethnicity using the association of MCP-1 -2518 polymorphism and tuberculosis susceptibility as a model. BMC Genetics. 2015;16:128.

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