

## MIP-1 alpha/CCL3 Protein, Mouse, Recombinant (His)

### General Information

Synonyms:	LD78 $\alpha$ ; MIP-1 $\alpha$ ; MIP1- $\alpha$ ; MIP-1 alpha; LD78 alpha; chemokine (C-C motif) ligand 3; Macrophage inflammatory protein 1-alpha; LD78a; Heparin-binding chemotaxis protein; Macrophage inflammatory protein 1- $\alpha$ ; Scya3; C-C motif chemokine 3
Protein Construction:	Ala24-Ala92
Species:	Mouse
Expression Host:	E. coli
Accession:	P10855
Molecular Weight:	15 KDa (reducing condition)
AA Sequence:	Ala24-Ala92

### 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:	Greater than 95% as determined by reducing SDS-PAGE. Greater than 95% as determined by SEC-HPLC.
Endotoxin:	< 0.1 ng/ $\mu$ g (1 EU/ $\mu$ g) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing 20 mM Tris-HCl, 150 mM NaCl, 5% Trehalose, 1 mM EDTA, pH 8.0.

### 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:

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

C-C Motif Chemokine 3 (MIP-1 alpha, CCL3) is a member of the beta or CC subfamily of chemokines and is closely related to CCL4/MIP-1 beta. CCL3 expression can be induced in a variety of hematopoietic cells, fibroblasts, smooth muscle cells, and epithelial cells. Mature mouse CCL3 shares 73%, 91%, and 82% amino acid sequence

identity with human, rat, and cotton rat CCL3, respectively. CCL3 exerts its biological functions through interactions with CCR1, CCR3, and CCR5. It is cleared from the extracellular space by internalization via the decoy chemokine receptor D6. CCL3 promotes the chemoattraction, adhesion to activated vascular endothelium, and cellular activation of many hematopoietic cell types including activated T cells, NK cells, neutrophils, monocytes, immature dendritic cells, and eosinophils. CCL3 is also known as stem cell inhibitor (SCI) and can inhibit the proliferation of hematopoietic progenitor cells. CCL3 bioactivity contributes to tumor metastasis and the inflammatory components of viral infection, rheumatoid arthritis, and hepatitis, although it also can suppress the replication of HIV.

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