

## Recombinant Human Macrophage Inflammatory Protein-1 alpha/CCL3

### Information

<b>Gene ID</b>	6348
<b>Accession #</b>	P10147
<b>Alternate Names</b>	G0/G1 switch regulatory protein 19-1, MIP-1-alpha, PAT 464.1, SIS-beta, Small-inducible cytokine A3, Tonsillar lymphocyte LD78 alpha protein
<b>Source</b>	Escherichia coli.
<b>M.Wt</b>	Approximately 7.8 kDa protein containing 70 amino acid residues, including the four highly conserved cysteine residues present in CC chemokines.
<b>AA Sequence</b>	ASLAADTPTA CCFSYTSRQI PQNFIADYFE TSSQCSKPGV IFLTKRSRQV CADPSEEWVQ KYVSDLELSA
<b>Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Stability &amp; Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM PB, pH 7.4, 100 mM NaCl.
<b>Reconstitution</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
<b>Biological Activity</b>	Fully biologically active when compared to standard. The biological activity determined by a chemotaxis bioassay using human monocytes is in a concentration range of 1.0-10 ng/ml.
<b>Shipping Condition</b>	Gel pack.
<b>Handling</b>	Centrifuge the vial prior to opening.
<b>Usage</b>	For Research Use Only! Not to be used in humans.

### Components and Storage

Components	5µg	100µg	500µg
Recombinant Human Macrophage Inflammatory Protein-1 alpha/CCL3	5µg	100µg	500µg

Use a manual defrost freezer and avoid repeated freeze-thaw cycles

- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

## Quality Control

Purity	> 96 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuMIP-1α/CCL3 as determined by LAL method.

## Description

CCL3, also known as macrophage inflammatory protein-1  $\alpha$  (MIP-1  $\alpha$ ), is a cytokine belonging to the CC chemokine family that is involved in the acute inflammatory state in the recruitment and activation of polymorphonuclear leukocytes. Studies showed CCL3 can bind to CCR1, CCR4 and CCR5. MIP-1  $\alpha$  can induce a dose-dependent inhibition of different strains of HIV-1, HIV-2, and simian immunodeficiency virus (SIV). Recombinant human MIP-1  $\alpha$  is a 7.8 kDa protein containing 69 amino acid residues, including the four highly conserved cysteine residues present in CC chemokines and it shares approximately 73 %, 74 % and 92 % amino acid sequence homology with the murine, rat and rhesus macaque protein.

## Reference

1. Guan E, Wang J, Norcross MA. 2001. J Biol Chem. 276:12404-9
2. Cocchi F, DeVico AL, Garzino-Demo A, et al. 1995. Science. 270:1811-5
3. Nakao M, Nomiya H, Shimada K. 1990. Mol Cell Biol. 10:3646-58
4. Czaplewski LG, McKeating J, Craven CJ, et al. 1999. J Biol Chem. 274:16077-84
5. 1991. Hum Gene Ther. 2:87-96.

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