

## Recombinant Rat Macrophage Inflammatory Protein-1 beta/CCL4

### Information

<b>Gene ID</b>	116637
<b>Accession #</b>	P50230
<b>Alternate Names</b>	Small-inducible Cytokine A4
<b>Source</b>	Escherichia coli.
<b>M.Wt</b>	Approximately 7.8 kDa, a single non-glycosylated polypeptide chain containing 69 amino acids.
<b>AA Sequence</b>	APIGSDPPTS CCFSYTSRKI HRNFVMDYYE TSSLCSQPAV VFLTCKGRQI CADPSEPWVN EYVNDLELN
<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 2 × PBS, pH 7.4, 3 % trehalose.
<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 peripheral blood monocytes is in a concentration range of 10-1000 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 Rat Macrophage Inflammatory Protein-1 beta/CCL4	5µg	100µg	500µg

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- 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	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rRtMIP-1β/CCL4 as determined by LAL method.

## Description

Chemokine (C-C motif) ligand 4 encoded by the CCL4 gene, also known as macrophage inflammatory protein-1  $\beta$  (MIP-1  $\beta$ ) is a CC chemokine with specificity for CCR5 receptors and it is a major HIV-suppressive factor produced by CD8+ T cells. In addition, it is a chemoattractant for natural killer cells, monocytes and a variety of other immune cells. Recombinant CCL4 induces a dose-dependent inhibition of different strains of HIV-1, HIV-2, and simian immunodeficiency virus (SIV). Furthermore, recombinant rat CCL4 contains 69 amino acids and it shares 80% and 86% a.a. sequence identity with human and murine CCL4. Both human and murine MIP-1  $\alpha$  and MIP-1  $\beta$  are active on human and murine hematopoietic cells.

## Reference

1. Miyamoto MNaruo K, Seko C, et al. 1993. Mol Cell Biol. 13:4251-9
2. Santos-Ocampo S, Colvin JS, Chellaiah A, et al. 1996. J Biol Chem. 271:1726-31
3. Chellaiah A, Yuan W, Chellaiah M, et al. 1999. J Biol Chem. 274:34785-94.

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