



## RayBiotech, Inc.

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### Certificate of Analysis and Data Sheet

# Recombinant Mouse Macrophage Inflammatory Protein-1 alpha (CCL3)

**Catalog No.**

228-11113

**Source:***Escherichia Coli.***Synonyms**

Small inducible cytokine A3, CCL3, Macrophage inflammatory protein 1-alpha, MIP-1-alpha, Tonsillar lymphocyte LD78 alpha protein, G0/G1 switch regulatory protein 19-1, G0S19-1 protein, SIS-beta, PAT 464.1, chemokine (C-C motif) ligand 3, MIP1A, SCYA3, G0S19-1, LD78ALPHA, TY-5, SIS-alpha, Heparin-binding chemotaxis protein, L2G25B.

**Introduction**

Macrophage Inflammatory Proteins (MIP) belong to the family of chemotactic cytokines known as chemokines. In humans, there are two major forms, MIP-1 $\alpha$  and MIP-1 $\beta$  that are now officially named CCL3 and CCL4 respectively. Both are major factors produced by macrophages after they are stimulated with bacterial endotoxins. They activate human granulocytes (neutrophils, eosinophils and basophils) which can lead to acute neutrophilic inflammation. They also induce the synthesis and release of other pro-inflammatory cytokines such as interleukin 1 (IL-1), IL-6 and TNF- $\alpha$  from fibroblasts and macrophages. The genes for CCL3 and CCL4 are both located on human chromosome 17.

**Description**

Macrophage Inflammatory Protein-1 alpha Mouse Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 69 amino acids and having a molecular mass of 7820 Dalton. The MIP-1a is purified by proprietary chromatographic techniques.

**Physical Appearance**

Sterile Filtered White lyophilized (freeze-dried) powder.

**Formulation**

The protein was lyophilized from 1mg/ml solution containing no additives.

**Purity**

Greater than 99.0% as determined by (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

**Solubility**

It is recommended to reconstitute the lyophilized Macrophage Inflammatory Protein-1a in sterile 18M $\Omega$ -cm H<sub>2</sub>O not less than 100 $\mu$ g/ml, which can then be further diluted to other aqueous solutions.

**The products are furnished for LABORATORY RESEARCH USE ONLY.  
Not for diagnostic or therapeutic use.**



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### ***Stability***

Lyophilized MIP-1a although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution CCL3 should be stored at 4°C between 2-7 days and for future use below -18°C.

For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

**Please prevent freeze-thaw cycles.**

### ***Amino acid sequence***

The sequence of the first five N-terminal amino acids was determined and was found to be, Ala-Pro-Tyr-Gly-Ala.

### ***Biological Activity***

The Activity is calculated by the ability to chemoattract of Balb3/C splenocytes using 1-10 ng/ml.

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