



## RayBiotech, Inc.

3607 Parkway Lane suite 200  
Norcross, GA 30092  
Tel: 770-729-2992, 1-888-494-8555  
Fax: 770-206-2393  
Website: [www.raybiotech.com](http://www.raybiotech.com)  
Email: [info@raybiotech.com](mailto:info@raybiotech.com)

### Certificate of Analysis and Data Sheet

# Recombinant Human Macrophage Inflammatory Protein-3 alpha (CCL20)

**Catalog No.**  
228-11121

**Source:**  
*Escherichia Coli.*

#### **Synonyms**

S Small inducible cytokine A20 precursor, CCL20, Macrophage inflammatory protein 3 alpha, MIP-3-alpha, Liver and activation-regulated chemokine, CC chemokine LARC, Beta chemokine exodus-1, CKb4, LARC, ST38, MIP3A, MIP-3a, SCYA20.

#### **Introduction**

CCL-20 is a chemotactic factor that draws lymphocytes & neutrophils, rather than monocytes. MIP-3 alpha inhibits proliferation of myeloid progenitors in colony formation assays. MIP3A plays a role in the formation and function of the mucosal lymphoid tissues by attracting lymphocytes and dendritic cells towards epithelial cells. C-terminal processed forms have been shown to be equally chemotactically active for leukocytes. CCL-20 holds antibacterial activity *e.coli* atcc 25922 and *s.aureus* atcc 29213. CCL-20 gene transcription is activated by *H. pylori*, which activates NF-kappaB through intracellular signal pathway which involves IkappaB kinase and NF-kappaB-inducing kinase. MIP-3 alpha is involved in chemokine-mediated lymphocyte trafficking during gastric inflammation in *Helicobacter* infection. CCL-20 expression is involved in the recruitment of CD45R0-positive T cell subsets into the intestinal lamina propria.

MIP-3A is in charge of the advancement of pulpal inflammation through the recruitment of C-C motif Receptor 6-expressing lymphocytes. Vaginal epithelial cells respond to factors present in semen by secreting MIP-3 alpha, which increases langerhans cells recruitment during HIV transmission.

#### **Description**

MIP-3 Alpha Human Recombinant produced in *E.Coli* is a single, non-glycosylated, polypeptide chain containing 70 amino acids and having a molecular mass of 8 kDa. The MIP-3a is purified by proprietary chromatographic techniques.

#### **Physical Appearance**

Sterile Filtered White lyophilized (freeze-dried) powder.

#### **Formulation**

Lyophilized from a concentrated (1mg/ml) solution in water containing no additives.

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



## RayBiotech, Inc.

3607 Parkway Lane suite 200  
Norcross, GA 30092  
Tel: 770-729-2992, 1-888-494-8555  
Fax: 770-206-2393  
Website: [www.raybiotech.com](http://www.raybiotech.com)  
Email: [info@raybiotech.com](mailto:info@raybiotech.com)

---

### ***Solubility***

It is recommended to reconstitute the lyophilized MIP-3 Alpha 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.

### ***Stability***

Lyophilized MIP-3a although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution CCL20 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.**

### ***Purity***

Greater than 97.0% as determined by

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

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

ASNFDCCCLGY TDRILHPKFI VGFTRQLANE GCDINAIIFH TKKKLSVCAN  
PKQTWVKYIV RLLSKKVKNM.

### ***Biological Activity***

Human MIP-3-Alpha is a chemoattractant to human T cells working in a concentration range of 7-70 ng/ml.

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