

# PRODUCT DATA SHEET



Bioworld Technology, Inc.

## Recombinant MIP-1 $\alpha$ /CCL3, Human

Catalog Number: BK0136-10 $\mu$ g

Source: Escherichia coli.

Quantity: 10 $\mu$ g

### Description:

MIP-1  $\alpha$ /CCL3, also known as LD78  $\alpha$ , is an inflammatory chemokine. MIP-1 $\alpha$  belongs to the CCL chemokine family, and shares 68% homology with MIP-1 $\beta$ . The mature form of MIP-1 $\alpha$  contains 69 amino acids, exists as dimers in solution, and tends to undergo reversible aggregation. The receptors of MIP-1 $\alpha$  *in vivo* are mainly the G-protein coupled receptors CCR1 and CCR5. Upon stimulation by endogenous and exogenous agents such as Interleukin-1 $\beta$ , Interferon- $\gamma$ , and lipoteichoic acid from Gram-positive bacteria, monocytes are able to secrete significant amounts of MIP-1 $\alpha$ . MIP-1 $\alpha$  augments the adhesions of T lymphocytes, monocytes, and neutrophils to vascular cell adhesion molecule 1. In addition, in wounds, MIP-1 $\alpha$  chemo-attracts macrophages in order to accelerate the tissue repair process. Recombinant human MIP-1  $\alpha$ /CCL3 (rhMIP-1  $\alpha$ ) produced in E.coli is a single non-glycosylated polypeptide chain containing 70 amino acids. A fully biologically active molecule, rhMIP-1  $\alpha$  has a molecular mass of 7.8 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

### Molecular Weight:

7.8 kDa, observed by reducing SDS-PAGE.

### Purity:

> 95% as analyzed by SDS-PAGE and HPLC.

### Biological Activity:

ED50 < 80 ng/mL, measured by the FLIPR assay using CHO cells transfected with human CCR5, the receptor

of human CCL3, corresponding to a specific activity of > 1.25 $\times 10^4$  units/mg.

### Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

### Formulation:

Lyophilized after extensive dialysis against PBS.

### AA Sequence:

ASLAADTPTACCFSYTSRQIPQNFADYFETSS-  
QCSKPGVIFLTKRS-  
RQVCADPSEEWVQKYVSDLELSA

### Endotoxin:

< 0.2 EU/ $\mu$ g, determined by LAL method.

### Reconstitution:

Reconstituted in ddH<sub>2</sub>O or PBS at 100  $\mu$ g/ml.

### Storage:

Lyophilized recombinant human MIP-1  $\alpha$ /CCL3 (rhMIP-1  $\alpha$ ) remains stable up to 6 months at -80  $^{\circ}$ C from date of receipt. Upon reconstitution, rhMIP-1  $\alpha$  remains stable up to 2 weeks at 4  $^{\circ}$ C or up to 3 months at -20  $^{\circ}$ C.

### Usage:

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