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## Product Information

### Macrophage Inflammatory Protein 1 $\alpha$ human, recombinant expressed in *E. coli*

Product Number **M6292**  
Storage Temperature  $-20^{\circ}\text{C}$

Synonyms: MIP-1 $\alpha$

#### Product Description

Macrophage inflammatory proteins (MIP) were originally co-purified from endotoxin-stimulated mouse macrophages.<sup>1</sup> Further biochemical analysis showed that MIP-1 was composed of two distinct, but highly related proteins, designated MIP-1 $\alpha$  and MIP-1 $\beta$ .<sup>2</sup> The human MIP-1 $\alpha$  cDNA's which have been cloned include pLD78, pAT464, and GOS 19.<sup>2</sup> MIP-1 $\alpha$  is composed of 66 amino acids and has a molecular mass of 7,500 Da.

MIP-1 $\alpha$  belongs to the chemokine  $\beta$  subfamily characterized by a C-C configuration at the first two cysteines. MIP-1 $\alpha$  mRNA can be detected in macrophages associated with human atherosclerotic plaques.<sup>2</sup> The human MIP-1 $\alpha$  gene can be expressed by B cells stimulated with *S. aureus* Cowan strain,<sup>4</sup> monocytes stimulated with LPS,<sup>1</sup> or T cells bound with CD3 antibody.<sup>3</sup>

This product is lyophilized from 0.2  $\mu\text{m}$ -filtered solution of 30% acetonitrile and 0.1% trifluoroacetic acid containing 0.5 mg bovine serum albumin.

The biological activity was measured by its ability to chemoattract cultured human monocytes or mouse BaF/3 cells transfected with human CCR5. The EC<sub>50</sub> is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

Purity:  $\geq 97\%$  (SDS-PAGE and N-terminal analysis)

Endotoxin: Tested

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Preparation Instructions

Reconstitute the contents of the vial using 0.2  $\mu\text{m}$ -filtered phosphate buffered saline containing 0.1% bovine serum albumin to a concentration not less than 1  $\mu\text{g}/\text{ml}$ .

#### Storage/Stability

Prior to reconstitution, store the product at  $-20^{\circ}\text{C}$ .

After reconstitution, store at  $2-8^{\circ}\text{C}$ . For extended storage, freeze in working aliquots at  $-70^{\circ}\text{C}$  or  $-20^{\circ}\text{C}$ . Repeated freezing and thawing is not recommended.

#### References

1. Wolpe, S. *et al.*, J. Exp. Med., **167**, 570 (1988).
2. Schall, T., Cytokine, **3**(3), 165 (1991).
3. Obaur, K. *et al.*, J. Biochem., **99**, 885 (1986).
4. Lipes, M. *et al.*, Proc. Natl. Acad. Sci. USA, **85**, 9704 (1988).
5. Graham, G. *et al.*, Nature, **344**, 442 (1990).

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