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## Product Information

### MACROPHAGE INFLAMMATORY PROTEIN 1 b (MIP-1 b)

Human Recombinant  
Expressed in *Sf21* cells

Product Number **M 6417**

#### Product Description

MIP-1  $\alpha$  and MIP-1  $\beta$  (macrophage inflammatory protein) 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  $\beta$  and MIP-1  $\alpha$ .<sup>2</sup> There are eight human MIP-1  $\beta$  cDNAs. These include Act-2, pAT 744, pAT 464, G-26, I-309, HC21, MAD-5  $\alpha$  and MAD-5  $\beta$ .<sup>2</sup> These human MIP-1  $\beta$  cDNAs encode proteins that are between 94%-98% identical.<sup>2</sup> Recombinant, human MIP-1  $\beta$  is produced with the Act-2 cDNA.<sup>3</sup>

MIP-1  $\beta$  consists of 69 amino acids with a molecular weight of 7.8 kDa. The gene for MIP-1  $\beta$  is found on human chromosome 17(q11-q21).<sup>4</sup> The MIP-1  $\beta$  gene can be expressed in T-cells stimulated with anti-CD3 antibody,<sup>5</sup> B cells stimulated with *S. aureus* Cowan strain<sup>3</sup> or monocytes stimulated with LPS.<sup>3</sup> *In vitro* MIP-1  $\beta$  stimulates H<sub>2</sub>O<sub>2</sub> production in human neutrophils.<sup>1</sup> MIP-1  $\beta$  belongs to the chemokine  $\beta$  family, in which the first two cysteines have a C-C configuration.

Carrier Protein: 500  $\mu$ g bovine serum albumin.

Sterility: 0.2  $\mu$ m-filtered, aseptic fill

#### Preparation Instructions

Reconstitute the contents of the vial with 0.2  $\mu$ m-filtered PBS containing 0.1% BSA to a concentration not less than 1  $\mu$ g/ml.

#### Storage/Stability

Prior to reconstitution, store at -20 °C. After reconstitution, store at 2-8 °C for a maximum of 3 months. For extended storage, freeze in working aliquots at -70 °C or -20 °C. Repeated freezing and thawing is not recommended.

#### Product Profile

The biological activity of MIP-1  $\beta$  was tested in culture by measuring its ability to inhibit hematopoietic stem cell proliferation in an *in vitro* colony assay.<sup>6</sup>

#### References

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2. Schall, T. J., *Cytokine*, **3**, 165 (1991).
3. Lipes, M., et al., *Proc. Natl. Acad. Sci. USA*, **85**, 9704 (1988).
4. Irving, S., et al., *Nucleic Acids Res.*, **18**, 3261.
5. Obaur, K., et al., *J. Biochem.*, **99**, 885 (1986).
6. Graham, G., et al., *Nature*, **344**, 442 (1990).

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