

## Recombinant Human Macrophage Inflammatory Protein-1 alpha (rh MIP-1alpha / CCL3)

**Synonyms:** Small inducible cytokine A3, SCYA3, Tonsillar lymphocyte LD78 alpha protein, LD78ALPHA.

**Introduction:** Macrophage Inflammatory Proteins (MIP) belong to the family of chemotactic cytokines known as chemokines. In humans there are two major forms. 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 MIP-1alpha and MIP-1beta are both located on human chromosome 17.

**Description:** Recombinant human MIP-1alpha produced in *E.Coli* is a single, non-glycosylated, polypeptide chain containing 70 amino acids and having a molecular mass of 7820 Dalton. rh MIP-1alpha is purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*.

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:** Lyophilized from 0.22  $\mu$ m filtered solution in 25 mM Sodium phosphate  
The aliquots/samples of 1 $\mu$ g contain Trehalose 5% (w/vol) for better recovery

**Solubility:** It is recommended to reconstitute the lyophilized rh MIP-1 alpha in sterile H<sub>2</sub>O not less than 100  $\mu$ g/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rh MIP-1alpha, although stable at room temperature for 3 weeks, should be stored desiccated below  $-18^{\circ}$  C. Upon reconstitution rh MIP-1alpha should be stored at  $4^{\circ}$  C between 2-7 days and for future use below  $-18^{\circ}$  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 95.0% as determined by SDS-PAGE.

**Amino acid Sequence:** ASLAADTPTA CCFSYTSRQI PQNFIADYFE TSSQCCKPGV IFLTKRSRQV  
CADPSEEVVQ KYVSDLELSA

**Biological Activity:** The activity is calculated by the ability of chemo-attraction of human monocytes using a range of 1-10 ng/ml.

**Endotoxicity:** The endotoxin level is less than 1 EU /  $\mu$ g determined by LAL method

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<i>small</i>	5 $\mu$ g	Cat.N°	11343200
<i>medium</i>	20 $\mu$ g	Cat.N°	11343204
<i>large</i>	100 $\mu$ g	Cat.N°	11343206
<i>x-large</i>	500 $\mu$ g	Cat.N°	11343207
<i>xx-large</i>	1000 $\mu$ g	Cat.N°	11343208

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