



Macrophage Inflammatory protein-1 beta (CCL4), mouse recombinant (rmMIP1b)

Catalog No: 97340

Lot No: XXXXX

Source: *E. coli*

Synonyms: Small inducible cytokine A4, CCL4, Macrophage inflammatory protein 1-beta, MIP-1- beta, MIP-1-beta(1-69), T-cell activation protein 2, ACT-2, PAT 744, H400, SIS-gamma, Lymphocyte activation gene 1 protein, LAG-1, HC21, G-26 T-lymphocyte-secreted protein, chemokine (C-C motif) ligand 4, ACT2, G-26, LAG1, MIP1B, SCYA4, AT744.1, MGC104418, MGC126025, MGC126026.

Background

Macrophage Inflammatory Proteins (MIP) belong to the family of chemotactic cytokines known as chemokines. In humans, there are two major forms, MIP-1 α and MIP-1 β that are now officially named CCL3 and CCL4 respectively. 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- α from fibroblasts and macrophages. The genes for CCL3 and CCL4 are both located on human chromosome 17.

Description

Macrophage Inflammatory protein-1 beta mouse recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 69 amino acids and having a molecular mass of 7808 Dalton. MIP-1b is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

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

Solubility

It is recommended to reconstitute the lyophilized MIP-1b in sterile 18 M Ω -cm H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized mouse MIP-1b, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution mouse CCL4 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 98.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

APYGADTPTA CCFYSYRKIP RQFIVDYFET SSLCSQPGVI FLTKRNRQIC ADSKETWVQE YITDLELNA

CONTACT US TODAY

BIOMOL GmbH • Kieler Straße 303a • 22525 Hamburg • Germany • info@biomol.de • www.biomol.de

Fon: +49 (0)40-853 260 0 • TOLL FREE IN GERMANY: Fon: 0800-246 66 51



Activity

Mouse MIP-1 beta activity is calculated by the ability to chemoattract human blood monocytes at 20 - 100 ng/ml corresponding to a specific activity of 10,000 - 50,000 IU/mg.

Usage

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