



Macrophage Inflammatory protein-1 beta (CCL4), rat recombinant (rrMIP-1b)

Catalog No: 97537
Lot No: XXXXX
Source: *E. coli*
Synonyms: C-C motif chemokine 4, Macrophage inflammatory protein 1-beta, MIP-1-beta, Small-inducible cytokine A4, Ccl4, Mip1b, Scya4

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 rat recombinant produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 69 amino acids and having a molecular mass of 7.8 kDa. MIP-1b is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Filtered (0.2 μ m) and lyophilized from a concentrated (1 mg/ml) solution in 30% acetonitrile and 0.1% TFA.

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 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 97.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

APIGSDPPTS CCFSYTSRKI HRNFVMDYYE TSSLCSQPAV VFLTKKGRQI CADPSEPWVN EYVNDLELN

Activity

Determined by its ability to chemoattract human monocytes using a concentration range of 0.01 - 1.0 μ g/ml.

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