



DATA SHEET

Details for MIP-4 Human

Description: Macrophage Inflammatory Protein-4 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 69 amino acids and having a molecular mass of 7813 Dalton. The MIP-4 is purified by proprietary chromatographic techniques.

Purity: Greater than 97.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

Amino Acid Sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Gln-Val-Gly-Thr.

Biological Activity: The Activity is calculated by the ability to chemoattract Human T lymphocytes at 1.0-10.0 ng/ml. **Physical Appearance:** Sterile Filtered White lyophilized (freeze-dried) powder.

Solubility: It is recommended to reconstitute the lyophilized Macrophage Inflammatory Protein 4 in sterile 18MO-cm H₂O not less than 100ug/ml, which can then be further diluted to other aqueous solutions. Macrophage Inflammatory Protein-4 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 69 amino acids and having a molecular mass of 7813 Dalton. The MIP-4 is purified by proprietary chromatographic techniques.

Chemokine (C-C motif) ligand 18 (CCL18) is a small cytokine belonging to the CC chemokine family that was previously called PARC (pulmonary and activation-regulated chemokine). CCL18 is approximately 60% identical in amino acid sequence to CCL3. It is expressed at high levels in lung and at lower levels in certain lymphoid tissues, such as the lymph nodes, and is chemotactic for activated T cells and nonactivated lymphocytes. The gene for human CCL18 contains three exons and is located on chromosome 17.

Function: Chemotactic factor that attracts lymphocytes but not monocytes or granulocytes. May be involved in B-cell migration into B-cell follicles in lymph nodes. Attracts naive T-lymphocytes toward dendritic cells and activated macrophages in lymph nodes, has chemotactic activity for naive T-cells, CD4+ and CD8+ T-cells and thus may play a role in both humoral and cell-mediated immunity responses.

Subcellular Location: Secreted.

Tissue Specificity: Expressed at high levels in lung, lymph nodes, placenta, bone marrow, dendritic cells present in germinal centers and T-cell areas of secondary lymphoid organs and macrophages derived from peripheral blood monocytes. Not expressed by peripheral blood monocytes and a monocyte-to-macrophage differentiation is a prerequisite for expression. Expressed in synovial fluids from patients with rheumatoid and septic arthritis and in ovarian carcinoma ascitic fluid.

Induction: Specifically induced in macrophages by IL-4, IL-13, and IL-10. Expression is inhibited by IFN-gamma while glucocorticoids exert a slightly positive synergistic effect in combination with IL-4. Strongly induced in several human cell lines, including monocytic U937 cells, by phorbol myristate acetate (PMA). Induced in PBMC by staphylococcal enterotoxins SEA and SEB.

Mass Spectrometry: Mass=7849.4; Method=Electrospray; Range=21-89; Source=PubMed:11745396;.

Mass Spectrometry: Mass=7652.1; Method=Electrospray; Range=23-89; Source=PubMed:11745396;.

Mass Spectrometry: Mass=7552.0; Method=Electrospray; Range=24-89; Source=PubMed:11745396;.

Similarity: Belongs to the intercrine beta (chemokine CC) family.

Additional Info for MIP-4 Human

Related Product Names	Small inducible cytokine A18, CCL18, Macrophage inflammatory protein 4, MIP-4, Pulmonary and activation-regulated chemokine, CC chemokine PARC, Alternative macrophage activation-associated CC chemokine 1, AMAC-1, Dendritic cell chemokine 1, DC-CK1, chemok
Purity	Greater than 97.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Format	Lyophilized from a 0.2um filtered concentrated (1.0mg/ml) solution in 20mM PB, pH 7.4, 100mM NaCl.
Stability	Lyophilized MIP-4 although stable at room temperature for 3 weeks, should be stored desiccated below -18 C. Upon reconstitution CCL18 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
Molecular Weight	9849
Swiss Prot Number	P55774

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