

## Recombinant Human Macrophage Inflammatory protein-3 beta (CCL19)

**Alternate names:** CCL19, MIP3 beta

**Catalog No.:** PA1169

**Quantity:** 5 µg

**Concentration:** 1.0 mg/ml

**Species:** Human

**Source:** E. coli, E.coli

**Format:** **State:** Sterile Filtered White lyophilized (freeze-dried) powder.

**Purity:** >99% Greater than 99.0% as determined by:

(a) Analysis by RP-HPLC.

(b) Anion-exchange FPLC.

(c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained.

**Buffer System:** Recombinant macrophage inflammatory protein 3beta, lyophilized from a concentrated solution in water containing no additives.

**Endotoxin Level:** Less than 0.1 ng/µg (IEU/µg) of MIP-3b.

**Dimers:** Less than 1% as determined by silver-stained SDS-PAGE gel analysis.

**Reconstitution:** It is recommended to reconstitute the lyophilized MIP-3b in sterile 18MΩ-cm H<sub>2</sub>O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

**Description:** Recombinant Human MIP-3b produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 77 amino acids. Recombinant MIP-3 beta is purified by proprietary chromatographic techniques.

**AA Sequence:**

The sequence of the first five N-terminal amino acids was determined and was found to be, Gly-Thr-Asn-Asp-Ala.

**Biological Activity:** This macrophage inflammatory protein 3beta is fully biologically active when compared to standard. The Activity is calculated by the ability to chemoattract Human T cells using a concentration of 10-50 ng/ml.

Molecular weight: 8809 Dalton.

**Molecular weight:** 9 kDa

**Add. Information:** Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm .

2. Analysis by RP-HPLC, using a standard solution of MIP-3beta as a Reference Standard.

**Storage:** Lyophilized MIP-3beta although stable at room temperature for 3 weeks, should be stored desiccated below -18 C. Upon reconstitution MIP-3b 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 avoid freeze-thaw cycles.

**General Readings:**

1. Hansson M, Lundgren A, Elgbratt K, Quiding-Järbrink M, Svennerholm AM, Johansson EL. Dendritic cells express CCR7 and migrate in response to CCL19 (MIP-3beta) after exposure to Helicobacter pylori. *Microbes Infect.* 2006 Mar;8(3):841-50. Epub 2006 Jan 13. PubMed PMID: 16500130.
2. Pilkington KR, Clark-Lewis I, McColl SR. Inhibition of generation of cytotoxic T lymphocyte activity by a CCL19/macrophage inflammatory protein (MIP)-3beta antagonist. *J Biol Chem.* 2004 Sep 24;279(39):40276-82. Epub 2004 Jul 1. PubMed PMID: 15231820.
3. Akahoshi T, Sasahara T, Namai R, Matsui T, Watabe H, Kitasato H, et al. Production of macrophage inflammatory protein 3alpha (MIP-3alpha) (CCL20) and MIP-3beta (CCL19) by human peripheral blood neutrophils in response to microbial pathogens. *Infect Immun.* 2003 Jan;71(1):524-6. PubMed PMID: 12496204.
4. Townson JR, Nibbs RJ. Characterization of mouse CCX-CKR, a receptor for the lymphocyte-attracting chemokines TECK/mCCL25, SLC/mCCL21 and MIP-3beta/mCCL19: comparison to human CCX-CKR. *Eur J Immunol.* 2002 May;32(5):1230-41. PubMed PMID: 11981810.
5. Parlato S, Santini SM, Lapenta C, Di Pucchio T, Logozzi M, Spada M, et al. Expression of CCR-7, MIP-3beta, and Th-1 chemokines in type I IFN-induced monocyte-derived dendritic cells: importance for the rapid acquisition of potent migratory and functional activities. *Blood.* 2001 Nov 15;98(10):3022-9. PubMed PMID: 11698286.
6. Scapini P, Laudanna C, Pinardi C, Allavena P, Mantovani A, Sozzani S, et al. Neutrophils produce biologically active macrophage inflammatory protein-3alpha (MIP-3alpha)/CCL20 and MIP-3beta/CCL19. *Eur J Immunol.* 2001 Jul;31(7):1981-8. PubMed PMID: 11449350.

**Pictures:**

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