

## MPIF-1/CCL23 Protein, Human (P.pastoris, His)

Cat. No.:	HY-P77088
Synonyms:	C-C motif chemokine 23; CCL23; CKB-8; MIP-3; MPIF-1; SCYA23
Species:	Human
Source:	P. pastoris
Accession:	P55773 (R46-N120)
Gene ID:	6368
Molecular Weight:	Approximately 9.9 kDa.

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	<p>CCL23, also known as macrophage inflammatory protein 3 (MIP-3) and myeloid progenitor inhibitory factor 1 (MPIF-1), is a small cytokine of the CC chemokine family, identified in 1997 in a cDNA library derived from human aortic endothelial cells and located on human chromosome 17. ccl23 has some amino acid similarity to ccl15 and is the only chemokine with an alternative splice variant in which the amino-terminal amino acid is deleted. Due to selective splicing, CCL23 occurs in two forms, the shorter CCL23α/CKβ8 and the longer CCL23β/CKβ8-1. CCL23 is expressed in liver, lung, pancreas and bone marrow tissues and is released by the constitutive type of monocyte-derived dendritic cells. ccl23 acts as a chemokine and is highly chemotactic for resting T cells and monocytes and slightly chemotactic for neutrophils. ccl23 functions primarily in combination with the chemokine receptor CCR1, a transmembrane G protein-coupled receptor. CCL23 has been reported to have dose-dependent inhibitory activity against progenitors of the granulocyte and monocyte producing lineages in mouse and human bone marrow stem cell colony formation assays in vitro. In addition, CCL23 plays a role in bone formation and is a potent chemoattractant for osteoblast precursors but has no effect on fully differentiated osteoblasts or osteoclasts. ccl23 has some pro-oncogenic effects and induces angiogenesis by activating CCR1 on vascular endothelial cells<sup>[1][4]</sup>.</p>
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### REFERENCES

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- [1]. Jan Korbecki, et al. CC Chemokines in a Tumor: A Review of Pro-Cancer and Anti-Cancer Properties of the Ligands of Receptors CCR1, CCR2, CCR3, and CCR4. *Int J Mol Sci.* 2020 Nov 9;21(21):8412.
- [2]. Kyu Yeon Han, et al. CCL23 up-regulates expression of KDR/Flk-1 and potentiates VEGF-induced proliferation and migration of human endothelial cells. *Biochem Biophys Res Commun.* 2009 Apr 24;382(1):124-8.
- [3]. Son KN, et al. Human CC chemokine CCL23 enhances expression of matrix metalloproteinase-2 and invasion of vascular endothelial cells. *Biochem Biophys Res Commun.* 2006 Feb 10;340(2):498-504.
- [4]. Chih-Horng Shih, et al. CCL23/myeloid progenitor inhibitory factor-1 inhibits production and release of polymorphonuclear leukocytes and monocytes from the bone marrow. *Exp Hematol.* 2005 Oct;33(10):1101-8.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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