

DESCRIPTION

Source *E. coli*-derived human CCL23/MPIF-1 protein
Arg22-Asn120
Accession # P55773

N-terminal Sequence Analysis Arg22

Predicted Molecular Mass 11.5 kDa

SPECIFICATIONS

SDS-PAGE 10.5 kDa, reducing conditions

Activity Measured by its ability to chemoattract BaF3 mouse pro-B cells transfected with human CCR1. The ED₅₀ for this effect is 0.02-0.1 µg/mL.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >97%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 µm filtered solution in Acetonitrile and TFA. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 µg/mL in sterile PBS.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Myeloid progenitor inhibitory factor (MPIF-1), also known as CKβ8 and MIP-3, is a member of the CC chemokine subfamily that is designated CCL23. Alternative splicing of the MPIF-1 gene results in two mRNAs that encode a short (CKβ8) and a long (CKβ8-1) isoform of the chemokine. CKβ8 cDNA encodes a 120 amino acid (aa) residue precursor protein with a putative 21 aa residue signal peptide that is cleaved to generate a 99 aa residue mature CKβ8 (aa 22 - 120). Additional N-terminal processing of the 99 aa residue variant can generate a 75 aa residue CKβ8 (aa 46 - 120) that is significantly more active than the 99 aa residue variant. Similarly, CKβ8-1 encodes a 137 aa residue precursor protein that can give rise to a 116 and a 92 aa residue chemokine. Among CC chemokine members, MPIF-1 is most closely related to MIP-5/CCL15 (67% sequence identity) and MIP-1α/CCL3 (51%). MPIF-1 mRNA is most abundant in the adult lung and liver, but is also present in bone marrow, placenta, and various myelomonocytic cell lines. MPIF-1 has been shown to suppress the low proliferative potential colony-forming cells that give rise to granulocyte and monocyte lineages. MPIF-1 binds to CCR1 with high affinity and has been shown to be a potent chemoattractant and activator of monocytes, dendritic cells, and osteoclast precursors.

References:

1. Patel, V. *et al.* (1997) *J. Exp. Med.* **185**:1163.
2. Youn, B-S. *et al.* (1998) *Blood* **91**:3118.
3. Nardelli, B. *et al.* (1999) *J. Leukoc. Biol.* **61**:822.
4. Berkhout, T.A. *et al.* (2000) *Biochem. Pharmacol.* **59**:591.