Recombinant Human CCL23/MPIF-1 aa 46-120

Catalog Number: 131-M1/CF

DESCRIPTION

Source	*E. coli*-derived human CCL23/MPIF-1 protein Arg46-Asn120 Accession # P55773.2
N-terminal Sequence Analysis	Arg46
Predicted Molecular Mass	8.6 kDa

SPECIFICATIONS

Activity	Measured by its ability to chemoattract BaF3 mouse pro-B cells transfected with human CCR1. The ED_{50} for this effect is 0.70-3.5 ng/mL. This 46-120 aa variant of CCL23 is significantly more active than the 22-120 aa variant (Catalog # 371-MP). The ED_{50} of the 22-120 aa variant on hCCR1 transfected BaF3 cells is 20-100 ng/mL.
Endotoxin Level	<0.01 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

CCL23, also known as MPIF-1, Ckβ8 and MIP-3, is a member of the CC chemokine subfamily that is designated CCL23. Alternative splicing of the CCL23 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, CCL23 is most closely related to MIP-5/CCL15 (67% sequence identity) and MIP-1α/CCL3 (51%). CCL23 mRNA is most abundant in the adult lung and liver, but is also present in bone marrow, placenta, and various myelomonocytic cell lines. CCL23 has been shown to suppress the low proliferative potential colony-forming cells that give rise to granulocyte and monocyte lineages. CCL23 binds to CCR1 with high affinity and has been shown to be a potent chemoattractant and activator of monocytes, dendritic cells, 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.

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