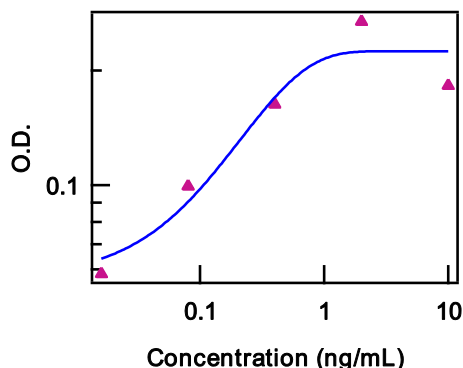


Mouse CCL3 (MIP-1 alpha) Recombinant Protein Carrier-Free

Catalog Number: 34-8000

Also known as: C-C motif Chemokine 3, Macrophage Inflammatory Protein-1 alpha

RUO: For Research Use Only. Not for use in diagnostic procedures.



Chemotaxis of CCR5-transfected CHO cells in response to Mouse CCL3 Recombinant Protein

Product Information

Contents: Mouse CCL3 (MIP-1 alpha) Recombinant Protein Carrier-Free
Catalog Number: 34-8000
Concentration: 0.5 mg/mL
Handling Conditions: For best recovery, quick-spin vial prior to opening. Use in a sterile environment.
Source: E. coli expressed amino acids Ala24-Ala92, accession number NP_035467
Molecular Mass: 8.0 kDa
Purity: > 97%, as determined by SDS-PAGE.
Endotoxin: Less than 0.01 ng/ug cytokine, as determined by the LAL assay.
Bioactivity: The bioactivity of this protein was determined by transmigration assay of mouse CCR5-transfected CHO cells, with maximum chemotaxis observed at 2-10 ng/mL.

Formulation: Sterile liquid: 0.1 M glycine, pH 3.0
Temperature Limitation: Store at less than or equal to -70°C.

Batch Code: Refer to vial

Use By: Refer to vial

Description

CCL3, also known as MIP-1 alpha (Macrophage Inflammatory Protein 1 alpha), is a member of the CC- subfamily of chemokines and is most closely related to CCL4, or MIP-1 beta. These proteins play critical roles in the recruitment of leukocytes to the site of inflammation. While both CCL3 and CCL4 are chemoattractant for monocytes, macrophages, and dendritic cells, CCL3 preferentially attracts CD8+ T cells, while CD4+ T cells are more responsive to CCL4. In addition to its chemotactic functions, CCL3 induces inflammatory cytokine secretion, mast cell degranulation, and NK cell activation. It has also been reported to inhibit hematopoietic stem cell proliferation and may be responsible for the maintenance of these cells in a quiescent state.

CCL3 signaling is mediated by the G protein-coupled receptor, CCR1, CCR4, and CCR5, which are shared with CCL4 and CCL5 (RANTES). CCR5 is the primary co-receptor for HIV entry, which it binds through the gp120 envelope protein. All CCR5 ligands demonstrate potent inhibition of virus entry into the cell, both through steric hindrance of gp120-CCR5 interaction, and ligand-mediated receptor internalization.

Applications Reported

Mouse CCL3 Protein Carrier-Free is biologically active.

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Applications Tested

The bioactivity of this protein was determined by transmigration assay of mouse CCR5-transfected CHO cells, with maximum chemotaxis observed at 2-10 ng/mL. The ED50 for this effect is less than or equal to 1 ng/mL. This corresponds to a specific activity of greater than or equal to 1 x 10⁶ Units/mg.

References

Brandt SM, Mariani R, Holland AU, Hope TJ, Landau NR. Association of chemokine-mediated block to HIV entry with coreceptor internalization. J Biol Chem. 2002 May 10;277(19):17291-1.

Cook DN. The role of MIP-1 alpha in inflammation and hematopoiesis. J Leukoc Biol. 1996 Jan;59(1)61-6.

Schall TJ, Bacon K, Camp RD, Kaspari JW, Goeddel DV. Human macrophage inflammatory protein alpha (MIP-1 alpha) and MIP-1 beta chemokines attract distinct populations of lymphocytes. J Exp Med. 1993 Jun 1;177(6):1821-6.

Related Products

14-8960 Mouse CCL5 (RANTES) Recombinant Protein

14-8972 Human CCL3 (MIP-1 alpha) Recombinant Protein