Human CCL8 (MCP-2) Recombinant Protein

Catalog Number: 14-8481
Also known as: C-C Motif Chemokine 8, Monocyte Chemoattractant Protein 2, SCYA10
RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Contents: Human CCL8 (MCP-2) Recombinant Protein

[REF] **Catalog Number:** 14-8481

Concentration: 0.1 mg/mL

Handling Conditions: For best recovery, quick-spin vial prior to opening. Use in a sterile environment.

Source: E. coli expressed amino acids Gln24-Pro99, accession number NM_005623

Molecular Mass: 8.9 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 human monocytes, with maximum chemotaxis observed at 100-150 ng/mL.

Formulation: Sterile liquid; 0.1 M glycine, 1% BSA, pH 3.0

Temperature Limitation: Store at less than or equal to -70°C.

[LOT] **Batch Code:** Refer to vial

Use By: Refer to vial

Description

CCL8, also known as MCP-2 (Monocyte Chemotactic Protein 2), is a member of the CC- subfamily of chemokines and is most closely related to CCL2 (MCP-1) and CCL7 (MCP-3). All three MCPs are secreted by a variety of cell types in response to inflammatory stimuli and play critical roles in the recruitment of leukocytes to areas of inflammation. While they are potent chemoattractants of monocytes and T cells, CCL7 appears to have the broadest range of activity, as it has also been demonstrated to attract activated NK cells, eosinophils, basophils, and neutrophils. CCL8 has also been demonstrated to attract NK cells, eosinophils, and basophils, but requires higher concentrations to do so. CCL8 signals via the G protein-coupled receptor CCR5, which is shared with other CC-chemokines. CCR5 is the primary co-receptor for HIV entry, which the virus 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

Human CCL8 Recombinant Protein is biologically active.

Applications Tested

The bioactivity of this protein was determined by transmigration assay of human monocytes, with maximum chemotaxis observed at 100-150 ng/mL. The ED50 for this effect is less than or equal to 50 ng/mL, which corresponds to a specific activity of greater than or equal to 2 x 10e4 Units/mg.

References

Thompson WL, Van Eldik LJ. Inflammatory cytokines stimulate the chemokines CCL2/MCP-1 and CCL7/MCP-3 through NFkB and MAPK dependent pathways in rat astrocytes. Brain Res. 2009 Sep 1;1287:47-57.

Jia T, Serbina NV, Brandl K, Zhong MX, Leiner IM, Charo IF, Pamer EG. Additive roles for MCP-1 and MCP-3 in CCR2-mediated recruitment of inflammatory monocytes during Listeria monocytogenes infection. J Immunol. 2008 May 15; 180(10):6846-53.

Proost P, Wuyts A, Van Damme J. Human monocyte chemotactic proteins-2 and -3: structural and functional comparison with MCP-1. J Leukoc Biol. 1996 Jan;59(1):67-74.

Related Products

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14-8198 Human CCL7 (MCP-3) Recombinant Protein
14-8398 Human CCL2 (MCP-1) Recombinant Protein