Human CCL19 (MIP-3 beta) Recombinant Protein

Catalog Number: 14-8997
Also known as: C-C Motif Chemokine 19
RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Contents: Human CCL19 (MIP-3 beta) Recombinant Protein
REF **Catalog Number:** 14-8997
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 Gly22-Ser98, accession number NM_006274
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 lymphocytes, with maximum chemotaxis observed at 100-200 ng/mL.

Formulation: Sterile liquid: phosphate-buffered saline, 1% BSA, pH 7.2
Temperature Limitation: Store at less than or equal to -70°C.
LOT **Batch Code:** Refer to vial
Use By: Refer to vial

Description

CCL19, also known as MIP-3 beta (Macrophage Inflammatory Protein 3 beta), is a member of the CC- subfamily of chemokines. It is most closely related to CCL21, with which it shares 32% amino acid sequence homology. CCL19 and CCL21 are expressed mainly by stromal cells in the T cell-rich zones of lymph nodes. They are critical mediators of the homeostatic trafficking of naïve T cells and activated dendritic cells into the secondary lymphoid organs. CCL19 and CCL21 also play a role in T cell priming and activation, as well as the recruitment of lymphocytes to inflamed tissue. Both proteins signal via the G protein-coupled receptor, CCR7, which is expressed on T cells and mature dendritic cells. Although CCL19 and CCL21 both exhibit the same affinity for CCR7, only the binding of CCL19 results in the desensitization and internalization of the receptor.

Applications Reported

Human CCL19 Recombinant Protein is biologically active.

Applications Tested

The bioactivity of this protein was determined by transmigration assay of human lymphocytes, with maximum chemotaxis observed at 100-200 ng/mL. The ED50 for this effect is less than or equal to 75 ng/mL, which corresponds to a specific activity of 1.3 x 10e4 Units/mg.

References

Zidar DA, Violin JD, Whalen EJ, Lefkowitz RJ. Selective engagement of G protein couple receptor kinases (GRKs) encodes distinct functions of biased ligands. Proc Natl Acad Sci USA. 2009 Jun 16;106(24):9649-54.

Ziegler E, Oberbarnscheidt M, Bulfone-Paus S, Forster R, Kunzendorf U, Krautwald S. CCR7 signaling inhibits T cell proliferation. J Immunol. 2007 Nov 15;179(10):6485-93.

Sanchez-Sanchez N, Riol-Blanco L, Rodriguez-Fernandez JL. The multiple personalities of the chemokine receptor CCR7 in dendritic cells. J Immunol. 2006 May 1;176(9):5153-9.

Related Products

12-1979 Anti-Human CD197 (CCR7) PE (3D12)

Tel: 888.999.1371 or 858.642.2058 • Fax: 858.642.2046 • www.ebioscience.com • info@ebioscience.com