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MCP 1 Rat

Monocyte Chemotactic Protein-1 Rat Recombinant (CCL2)
CHK0101

Product Overview

Name	MCP 1 Rat

Description

Monocyte Chemotactic Protein-1 Rat Recombinant (CCL2)

Accession (Primary)	P14844

Synonyms

Small inducible cytokine A2, CCL2, Monocyte chemotactic protein 1, MCP-1, Monocyte chemoattractant protein 1, Monocyte chemotactic and activating factor, MCAF, Monocyte secretory protein JE, HC11, chemokine (C-C motif) ligand 2, MCP1, SCYA2, GDCF-2, SMC-CF, HSMCR30, MGC9434, GDCF-2 HC11, Immediate-early serum-responsive JE protein.

Introduction

Chemokine (C-C motif) ligand 2 (CCL2) is a small cytokine belonging to the CC chemokine family that is also known as monocyte chemotactic protein-1 (MCP-1). It is found at the site of tooth eruption and bone degradation. In the bone, CCL2 is expressed by mature osteoclasts and osteoblasts and is under the control of nuclear factor ?B (NF?B). CCL2 recruits immune cells, such as monocytes, to sites of tissue injury and infection. This chemokine is produced as a protein precursor containing signal peptide of 23 amino acids and a mature peptide of 76 amino acids. It is a monomeric polypeptide, with a molecular weightof approximately 13kDa. As with many other CC chemokines, CCL2 is located on chromosome 17 in humans. The cell surface receptors that bind CCL2 are CCR2 and CCR5.

Source

Escherichia Coli.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

The protein was lyophilized from a concentrated (1mg/ml) sterile solution containing no additives.

Stability

Lyophilized MCP-1 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution CCL2 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

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Greater than 98.0% as determined by SDS-PAGE.

Amino acid sequence

QPDAVNAPLT CCYSFTGKMI PMSRLENYKR ITSSRCPKEA VVFVTKLKRE ICADPNKEWV QKYIRKLDQN QVRSETTVFY KIASTLRTSA PLNVNLTHKS EANASTLFST TTSSTSVEVT SMTEN.

Biological Activity

ED50 =1-10ng/ml corresponding to a Specific Activity of 100,000-1,000,000IU/mg. The biological activity was determined by measuring the dose dependent chemotaxis with human THP-1 cells. The optimal concentration should be determined for each specific application by an initial dose-response assay.

Solubility

It is recommended to reconstitute the lyophilized Monocyte Chemotactic Protein-1 in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

References

Title: Adiponectin Reduces Hepatic Stellate Cell Migration by Promoting Tissue Inhibitor of Metalloproteinase-1 (TIMP-1) Secretion Publications: Journal of Biological Chemistry (2015): jbc-M114. Link: MCP 1 Rat prospec publication

Precautions

MCP 1 Rat is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P14844)