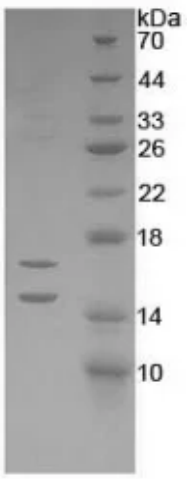
Active Monocyte Chemotactic Protein 1 (MCP1)

Catalog#:PEH12159

概述（Summary）

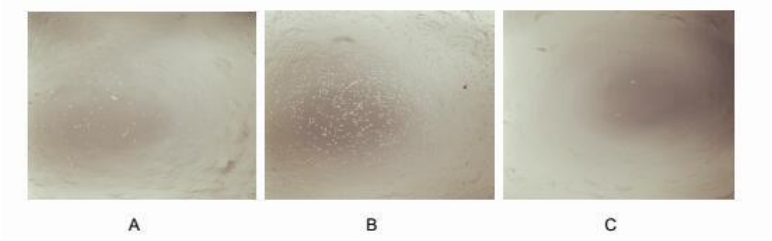
别称（Alternative Names）	CCL2; GDCF2; HC11; HSMCR30; MCAF; MCP1; SCYA2; SMC-CF; Chemokine C-C-Motif Ligand 2; Monocyte Chemotactic And Activating Factor; Monocyte Secretory Protein JE
纯度（Purity）	Greater than 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Gln24-Thr99】
Accession #	P13500
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	9.5 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 20mM Tris, 150mM NaCl (PH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Acts as a ligand for C-C chemokine receptor CCR2. Signals through binding and activation of CCR2 and induces a strong chemotactic response and mobilization of intracellular calcium ions. Exhibits a chemotactic activity for monocytes and basophils but not neutrophils or eosinophils. May be involved in the recruitment of monocytes into the arterial wall during the disease process of atherosclerosis.

电泳图（SDS-PAGE image）

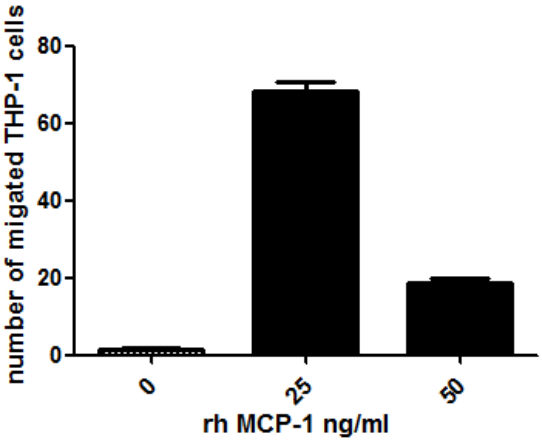


Greater than 90% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）



MCP-1 (monocyte chemoattractant protein 1), also known as CCL2 (C-C motif chemokine 2), is a small cytokine that belongs to the CC chemokine family. MCP-1 has been described as a chemoattractant for monocytes and proven to be able to induce chemotactic migration of THP-1 cells. Therefore, chemotaxis assay used 24-well microchemotaxis system was undertaken to detect the chemotactic effect of MCP-1 on the human monocytic cell line THP-1. Briefly, THP-1 cells were seeded into the upper chambers (100uL cell suspension, 106 cells/mL in RPMI 1640 with 0.5% FBS) and MCP-1 (25ng/mL and 50ng/mL diluted separately in serum free RPMI 1640) was added in lower chamber with a polycarbonate filter (8um pore size) used to separate the two compartments. After incubation at 37oC with 5% CO2 for 3h, the filter was removed, then cells in low chamber were observed by inverted microscope at low magnification (×100) and the number of migrated cells were counted at high magnification (×400) randomly (five fields for each filter).
Result: MCP-1 is able to induce migration of THP-1 cells. The migrated THP-1 cells in low chamber at low magnification (×100) were shown in Figure 1. Five fields of each chamber were randomly chosen, and the migrated cells were counted at high magnification (×400). Statistical result were shown in Figure 2. The optimum chemotactic concentration of MCP-1 is about 25ng/mL, which is in accordance with references.
(A) THP-1 cells were seeded into the upper chambers and serum free RPMI 1640 with 50ng/mL MCP-1 was added in lower chamber, then cells in lower chamber were observed at low magnification (×100) after incubation for 3h;
(B) THP-1 cells were seeded into the upper chambers and serum free RPMI 1640 with 25ng/mL MCP-1 was added in lower chamber, then cells in lower chamber were observed at low magnification (×100) after incubation for 3h;
(C) THP-1 cells were seeded into the upper chambers and serum free RPMI 1640 without MCP-1 was added in lower chamber, then cells in lower chamber were observed at low magnification (×100) after incubation for 3h.
Figure . The chemotactic effect of MCP-1 on THP1 cells. Figure. The chemotactic effect of MCP-1 on THP-1 cells



注意事项（Note）

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