Active Monocyte Chemotactic Protein 1 (MCP1)

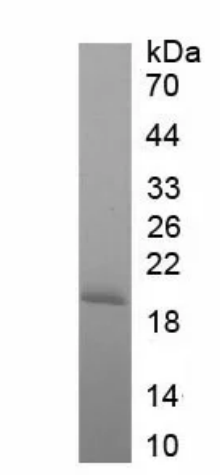
Catalog#:PER12161

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 97% 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-Asn148】
Accession #	P14844
表达宿主（Host）	E.coli
种属（Species）	Rattus norvegicus (Rat)
预测分子量（Predicted MW）	15.4 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 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 10mM PBS (pH7.4) 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. Plays an important role in mediating peripheral nerve injury-induced neuropathic pain. Increases NMDA-mediated synaptic transmission in both dopamine D1 and D2 receptor-containing neurons, which may be caused by MAPK/ERK-dependent

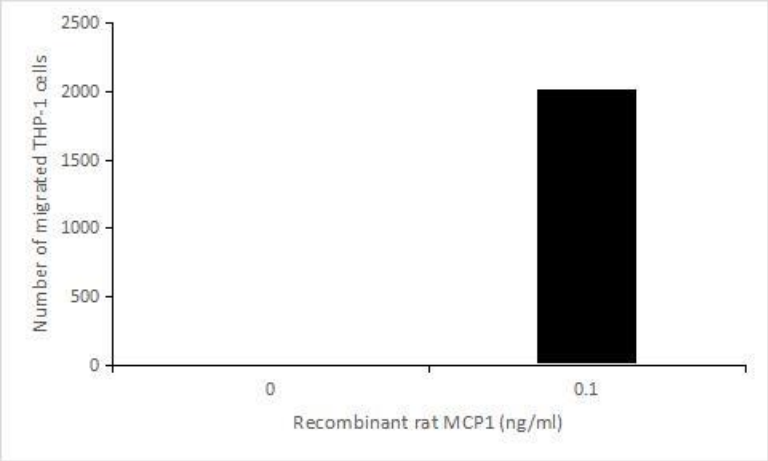
phosphorylation of GRIN2B/NMDAR2B.

电泳图（SDS-PAGE image）



Greater than 97% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）



Monocyte Chemotactic Protein 1 (MCP1), also known as C-C motif chemokine 2(CCL2), is a member of the β (C-C) subfamily of chemokines that is a chemoattractant for monocytes and basophils. Rat CCL2 is secreted as a 14 kDa glycoprotein monomer but noncovalent dimers probably occur. CCL2 is best known as a chemotactic agent for mononuclear cells. Thus, chemotaxis assay used 24-well microchemotaxis system was undertaken to detect the chemotactic effect of recombinant rat MCP1 on the THP-1 cell line. Briefly, THP-1 cells were seeded into the upper chambers (150 µL cell suspension, 106 cells/mL in RPMI 1640 with FBS free) and MCP1 (0.01 ng/mL, 0.1 ng/mL, 1 ng/mL, 10 ng/mL,100 ng/mL and 1000 ng/mL diluted separately in serum free RPMI 1640) was added in lower chamber with a polycarbonate filter (8 µm pore size) used to separate the two compartments. After incubation at 37 ℃ with 5% CO2 for 2h, 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 shows MCP1 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 results were shown in Figure 2. The optimum chemotaxis of recombinant rat MCP1 occurs at 0.01-0.1 ng/mL. Figure 2. The chemotactic effect of recombinant rat MCP1 on THP-1cells

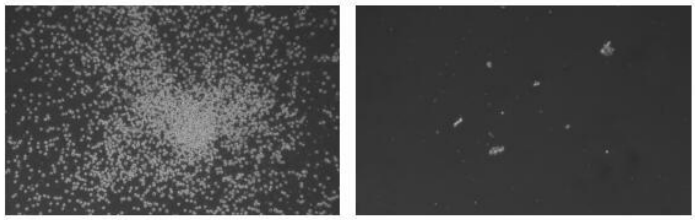


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Figure 1. The chemotactic effect of recombinant rat MCP1 on THP-1cells

(A) THP-1 cells were seeded into the upper chambers and serum free RPMI 1640 with 0.1 ng/mL MCP1 was added in lower chamber, then cells in lower chamber were observed at low magnification (×100) after incubation for 2h;
(B) THP-1 cells were seeded into the upper chambers and serum free RPMI 1640 without MCP1 was added in lower chamber, then cells in lower chamber were observed at low magnification (×100) after incubation for 2h.

注意事项（Note）

For Research Use Only , Not for Diagnostic Use.