

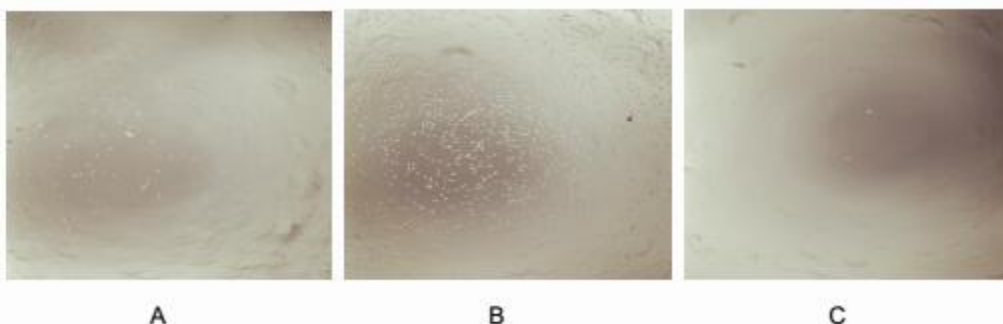
Active Monocyte Chemotactic Protein 1 (MCP1) Instruction Manual

SBPA057Hu01

Homo sapiens (Human)

Buffer Formulation	20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
Traits	Freeze-dried powder
Purity	> 90%
Isoelectric Point	9.4
Applications	Cell culture; Activity Assays.

ACTIVITY TEST



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 ($\times 400$). 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 ($\times 100$) 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 ($\times 100$) 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 ($\times 100$) after incubation for 3h. Figure . The chemotactic effect of MCP-1 on THP1 cells.

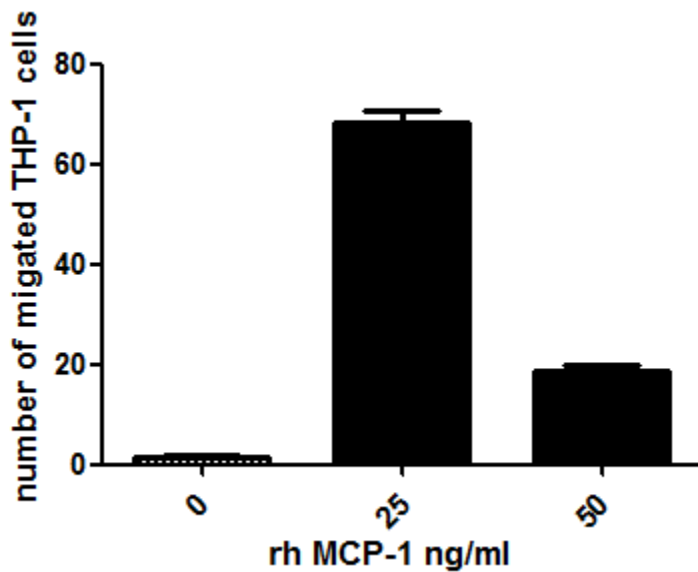


Figure. The chemotactic effect of MCP-1 on THP-1 cells

USAGE

Reconstitute in 20mM Tris, 150mM NaCl (PH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

STORAGE

Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.

STABILITY

The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

Image

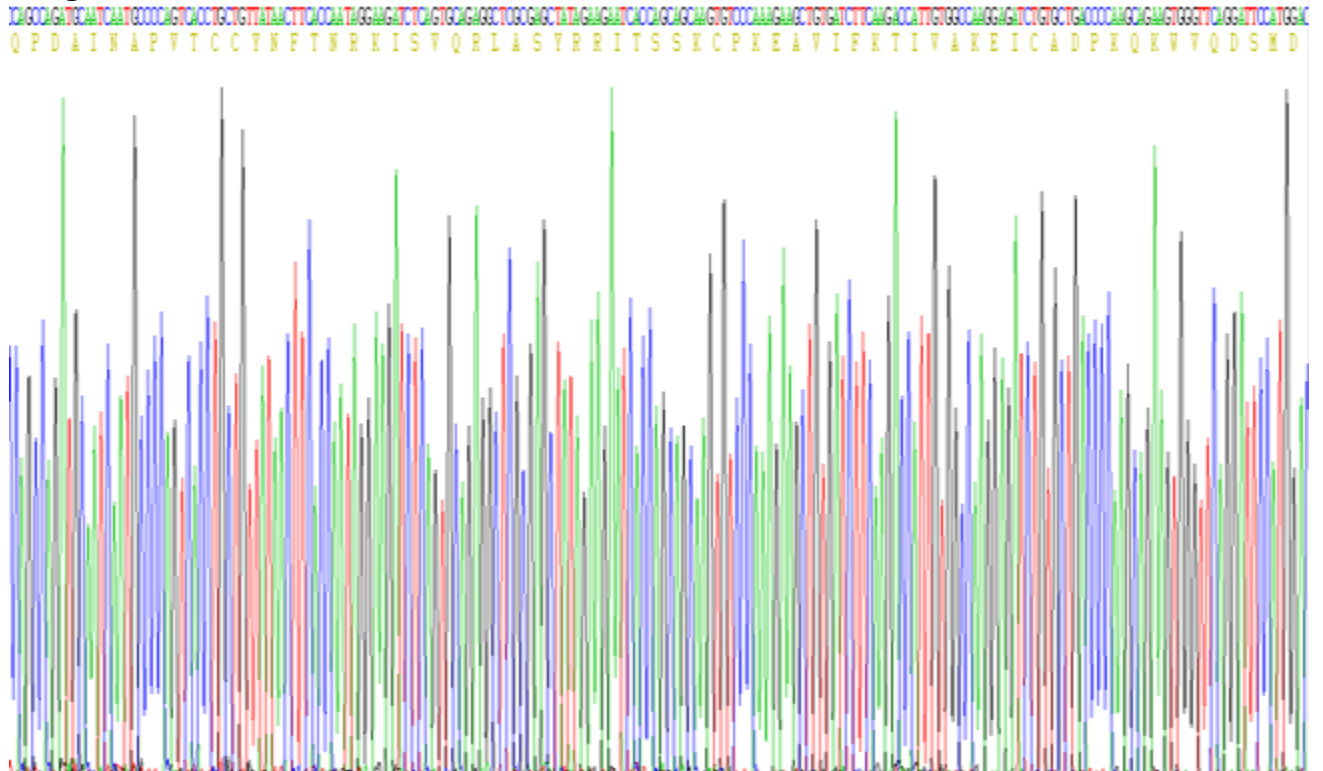


Figure. Gene Sequencing (extract)

Image

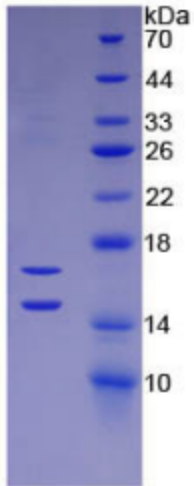
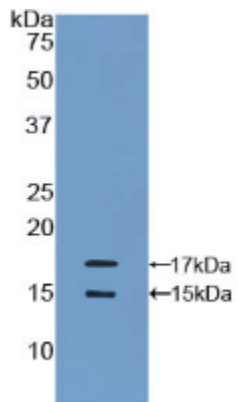


Figure. SDS-PAGE



Sample: Recombinant MCP1, Human;
Antibody: Rabbit Anti-Human MCP1 Ab (PAA087Hu01)
Figure. Western Blot

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.