

Active Monocyte Chemotactic Protein 4 (MCP4) Instruction Manual

SBPA100Hu51

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

> 95%

Isoelectric Point

10.0

Applications

Cell culture; Activity Assays; In vivo assays.

ACTIVITY TEST

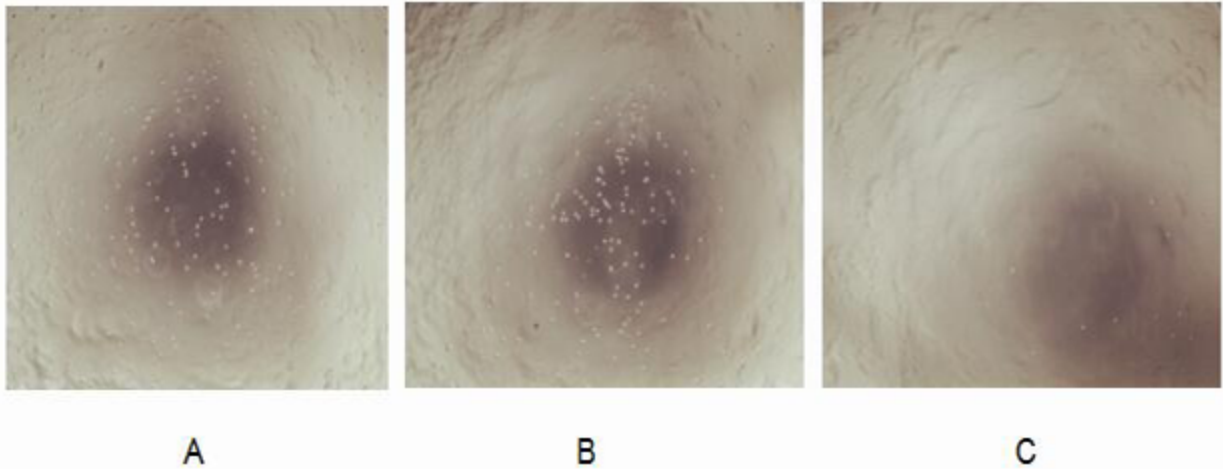


Figure 1. The chemotactic effect of CCL13 on THP-1 cells.

(A) THP-1 cells were seeded into the upper chambers and 50ng/mL CCL13 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 100ng/mL CCL13 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 CCL13 was added in lower chamber, then cells in lower chamber were observed at low magnification ($\times 100$) after incubation for 3h.

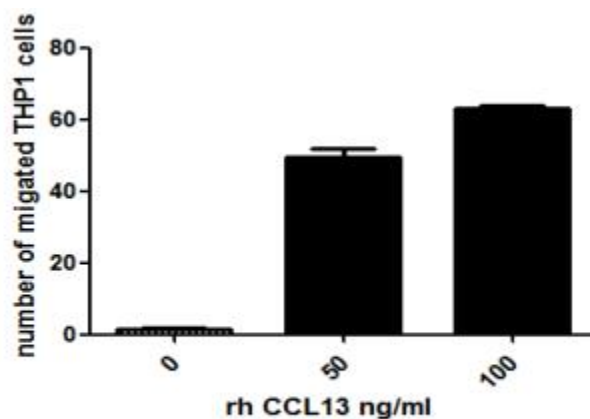


Figure 2. The chemotactic effect of CCL13 on THP-1 cells.

CCL13 (C-C motif chemokine 13) is a chemotactic factor that attracts monocytes, lymphocytes, basophils and eosinophils, which belongs to the CC chemokine subfamily. It has been reported that CCL13 can induce chemotactic migration of THP-1 cells. Therefore, chemotaxis assay used 24-well microchemotaxis system was undertaken to detect the chemotactic effect of CCL13 on the human monocytic cell line THP-1. Briefly, THP-1 cells were seeded into the upper chambers (100 μ L cell suspension, 106 cells/mL in RPMI 1640 with 0.5% FBS) and CCL13 (50ng/mL and 100ng/mL diluted separately in serum free RPMI 1640) was added in lower chamber with a polycarbonate filter (8 μ m pore size) used to separate the two compartments. After incubation at 37°C with 5% CO₂ for 3h, the filter was removed, then cells in low chamber were observed by inverted microscope at low magnification (\times 100) and the number of migrated cells were counted at high magnification (\times 400) randomly (five fields for each filter). Result: CCL13 is able to induce migration of THP-1 cells. The migrated THP-1 cells in low chamber at low magnification (\times 100) were shown in Figure 1. Five fields of each chamber were randomly chosen to count the migrated cells at high magnification (\times 400) and the statistical data was shown in Figure 2.

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

