

Human MCP1 / CCL2 protein, His tag (active)

Cat. No. GTX00415-pro

Applications	Functional Assay	Package
Species	Human	10 µg

Applications

Application Note

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 (100 µl cell suspension, 10⁶ cells/ml in RPMI-1640 with 0.5% FBS) and MCP-1 (25 and 50 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°C 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). MCP-1 is able to induce migration of THP-1 cells, and the optimum chemotactic concentration of MCP-1 is about 25 ng/ml.

Observed MW (kDa) 15/17 kDa.

Properties

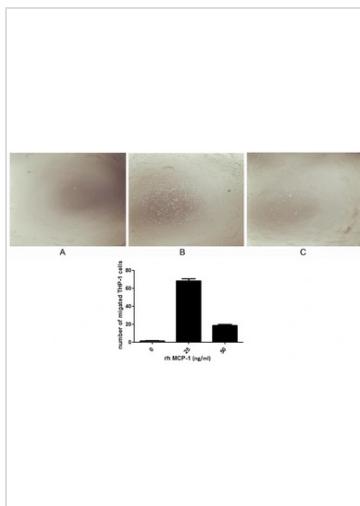
Form	Lyophilized powder
Buffer	Reconstitute with 20mM Tris (pH8.0) and 150mM NaCl to 0.1-1.0mg/ml. Do not vortex. Lyophilized from 20mM Tris (pH8.0), 150mM NaCl, 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose.
Preservative	ProClin 300
Storage	For short-term storage (1-2 weeks), store at 4°C. For long-term storage, store at -20°C or below. After reconstitution, keep as concentrated solution. Avoid freeze-thaw cycles.
Region/Sequence	N-terminal His-Tag; Gln24~Thr99 (NP_002973.1)
Expression System	E. coli
Purity	> 90%
Endotoxin	< 1 EU/µg
Conjugation	Unconjugated
Note	For laboratory use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.



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DATA IMAGES



GTX00415-pro Functional Assay Image

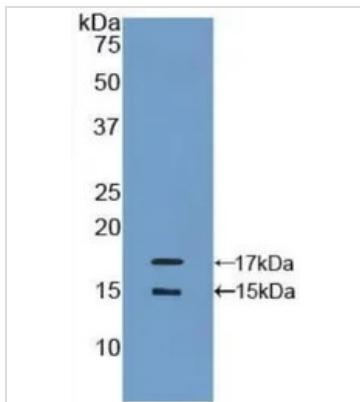
The chemotactic effect of GTX00415-pro Human MCP1 / CCL2 protein (active).

Upper: (A) 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 3hrs.

(B) THP-1 cells were seeded into the upper chambers and serum free RPMI-1640 with 25 ng/ml MCP-1 was added in lower chamber, then cells in lower chamber were observed at low magnification ($\times 100$) after incubation for 3hrs.

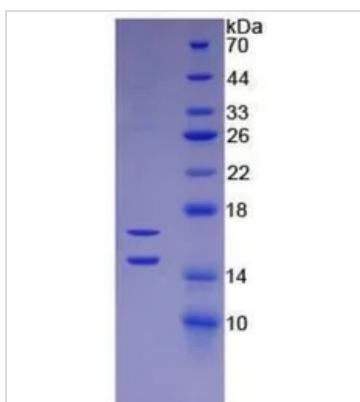
(C) THP-1 cells were seeded into the upper chambers and serum free RPMI-1640 with 50 ng/ml MCP-1 was added in lower chamber, then cells in lower chamber were observed at low magnification ($\times 100$) after incubation for 3hrs.

Lower: The number of migrated cells were counted at high magnification ($\times 400$) randomly (five fields for each filter).



GTX00415-pro Image

WB analysis of GTX00415-pro Human MCP1 / CCL2 protein (active).



GTX00415-pro Image

SDS-PAGE analysis of GTX00415-pro Human MCP1 / CCL2 protein (active).



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