APA092Mu61 100μg
Active Macrophage Inflammatory Protein 1 Alpha (MIP1a)
Organism Species: *Mus musculus (Mouse)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Eukaryotic expression.
Host: 293F cell
Residues: Ala24~Ala92
Tags: N-terminal His-tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 5% Trehalose .
Original Concentration: 200μg/mL
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 4.9
Predicted Molecular Mass: 9.5kDa
Accurate Molecular Mass: 13kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.
Store at 2-8ºC for one month.
Aliquot and store at -80ºC for 12 months.
Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the

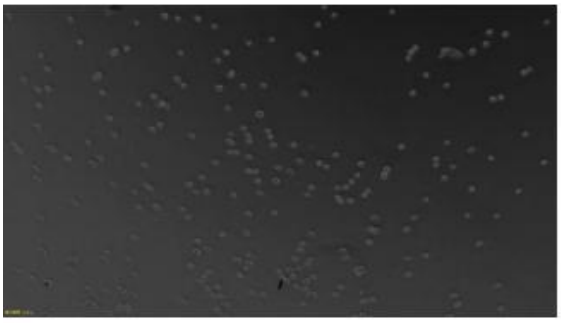
protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

APYGADT PTACCFSYSR KIPRQFIVDY
FETSSLCSQP GVIFLTKRNR QICADSKETW VQEYITDLEL NA

[ACTIVITY]

MIP-1a (macrophage inflammatory protein 1-alpha) also known as Chemokine (C-C motief) ligand 3 (CCL3), is a cytokine belonging to the CC chemokine family that is involved in the recruitment and activation of macrophages, monocytes and neutrophils. In this case, chemotaxis assay used 24-well microchemotaxis system was undertaken to evaluate the chemotactic effect of MIP-1a on the human monocytic cell line THP1. Briefly, THP1 cells were seeded into the upper chambers and various concentrations of MIP-1a was added in lower chamber with a polycarbonate filter (8 um 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 using Image J. The migrated THP1 cells in low chamber at low magnification (×100) was shown in Figure 1. The number of migrated THP-1 cells was shown in Figure 2. The optimum chemotaxis of MIP-1a occurs at 1 ug/ml.



A

B

Figure 1. The chemotactic effect of MIP-1a on THP1 cells

(A) THP1 cells were seeded into the upper chambers and serum free RPMI 1640 with 1 ug/ml MIP-1a was added in lower chamber, then cells in lower chamber were observed at low magnification(×100) after incubation for 2h;

(B) THP1 cells were seeded into the upper chambers and serum free RPMI 1640 with no MIP-1a was added in lower chamber, then cells in lower chamber were observed at low magnification (×100) after incubation for 2h.

Figure 2. The number of migrated THP-1 cells

[IDENTIFICATION]

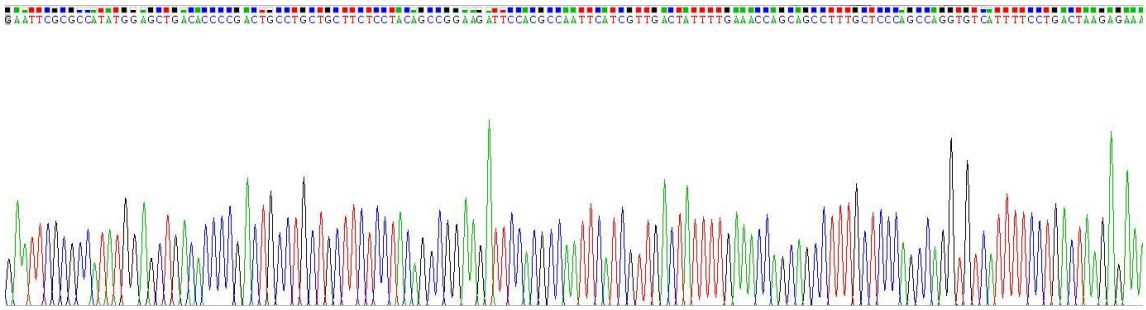


Figure 3. Gene Sequencing (extract)

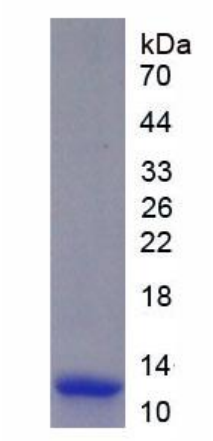


Figure 4. SDS-PAGE

Sample: Active recombinant MIP1a, Mouse

[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.