

**APA095Hu02 100µg**

**Active Active Macrophage Inflammatory Protein 3 Alpha (MIP3a)**

**Organism Species: *Homo sapiens* (Human)**

***Instruction manual***

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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12th Edition (Revised in Aug, 2016)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Ala27~Met96

**Tags:** Two N-terminal Tags, His-tag and GST-tag

**Purity:** >92%

**Endotoxin Level:** <1.0EU per 1µg (determined by the LAL method).

**Buffer Formulation:** 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.

**Applications:** Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

**Predicted isoelectric point:** 8.5

**Predicted Molecular Mass:** 38.0kDa

**Accurate Molecular Mass:** 40kDa as determined by SDS-PAGE reducing conditions.

## **[ USAGE ]**

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

## **[ STORAGE AND STABILITY ]**

**Storage:** Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C 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 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.

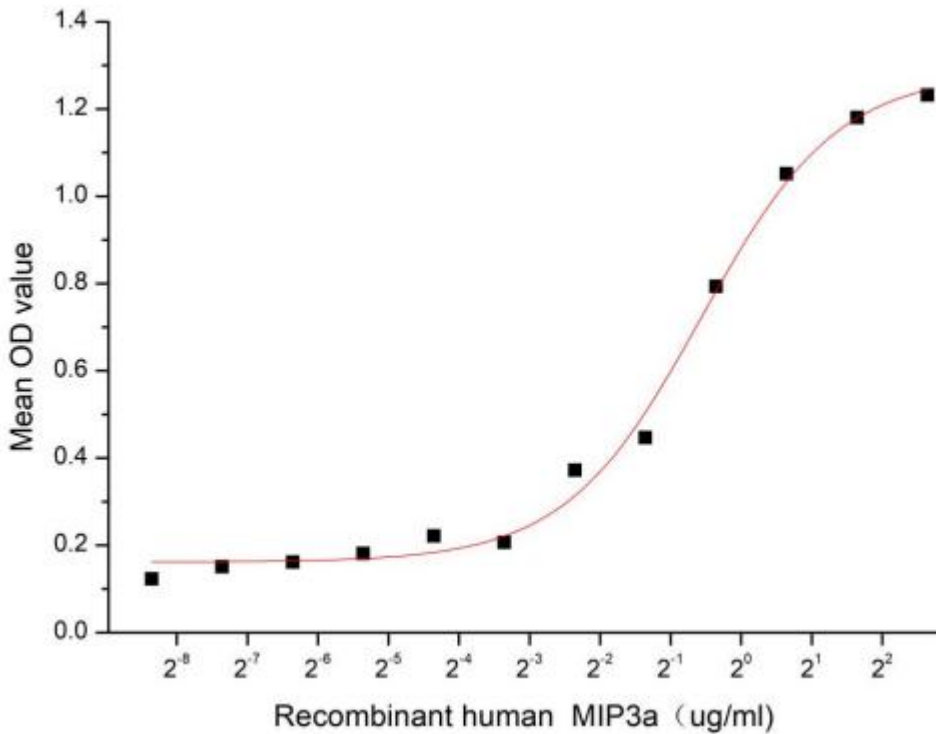
## **[ SEQUENCE ]**

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ASNF DCCLGYTDRI LHPKFIVGFT  
RQLANEGCDI NAIIFHTKKK LSVCANPKQT WVKYIVRLLS KVKKNM
```

## **[ ACTIVITY ]**

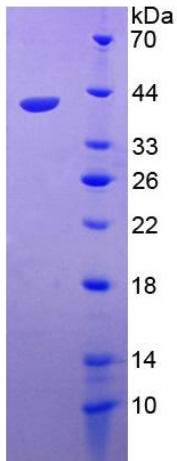
Macrophage Inflammatory Protein 3 Alpha (MIP3a) also known as Chemokine (C-C motif) ligand 20 (CCL20) or liver activation regulated chemokine (LARC) is a small cytokine belonging to the CC chemokine family. It is strongly chemotactic for lymphocytes and weakly attracts neutrophils. MIP3a is implicated in the formation and function of mucosal lymphoid tissues via chemoattraction of lymphocytes and dendritic cells towards the epithelial cells surrounding these tissues. It is expressed in several tissues such as peripheral blood lymphocytes, lymph nodes, liver, appendix, fetal lung. Expression of MIP3a can be induced by microbial factors such as lipopolysaccharide (LPS), and inflammatory cytokines such as tumor necrosis factor and interferon- $\gamma$ , and down-regulated by IL-10. Besides, Interleukin 1 Alpha (IL1a) has been identified as an interactor of MIP3a, thus a binding ELISA assay was conducted to detect the interaction of recombinant human MIP3a and recombinant human IL1a. Briefly, MIP3a were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to IL1a-coated microtiter wells and incubated for 2h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-MIP3a pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were

incubated 15-25 minutes at 37°C. Finally, add 50 µL stop solution to the wells and read at 450nm immediately. The binding activity of MIP3a and IL1a was shown in Figure 1, and this effect was in a dose dependent manner, the EC50 for this effect is 0.676 ug/mL.



**Figure 1. The binding activity of recombinant human MIP3a with recombinant human IL1a**

**[ IDENTIFICATION ]**



**Figure 2. SDS-PAGE**

**Sample: Active recombinant MIP3a, Human**

**[ 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.