

**APA860Hu02 100µg**

**Active Epithelial Neutrophil Activating Peptide 78 (ENA78)**

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

***Instruction manual***

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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1st Edition (Apr, 2016)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Arg45~Asn114

**Tags:** N-terminal His-tag

**Purity:** >95%

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

**Buffer Formulation:** PBS, pH7.4, containing 0.01% SKL, 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:** 9.1

**Predicted Molecular Mass:** 11.8kDa

**Accurate Molecular Mass:** 12kDa 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 2-8°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.

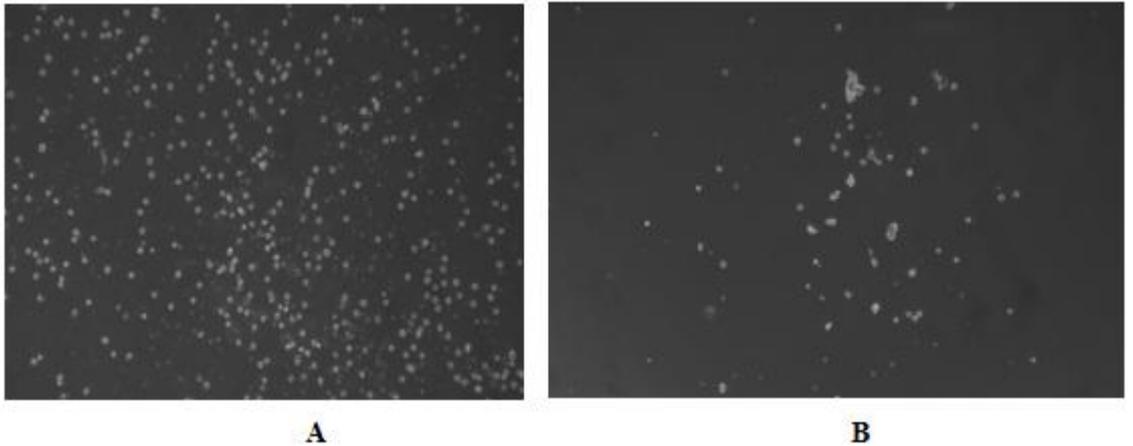
## **[ SEQUENCE ]**

RELRCV  
CLQTTQGVHP KMISNLQVFA IGPQCSKVEV VASLKNGKEI CLDPEAPFLK  
KVIQKILDGG NKEN

## **[ ACTIVITY ]**

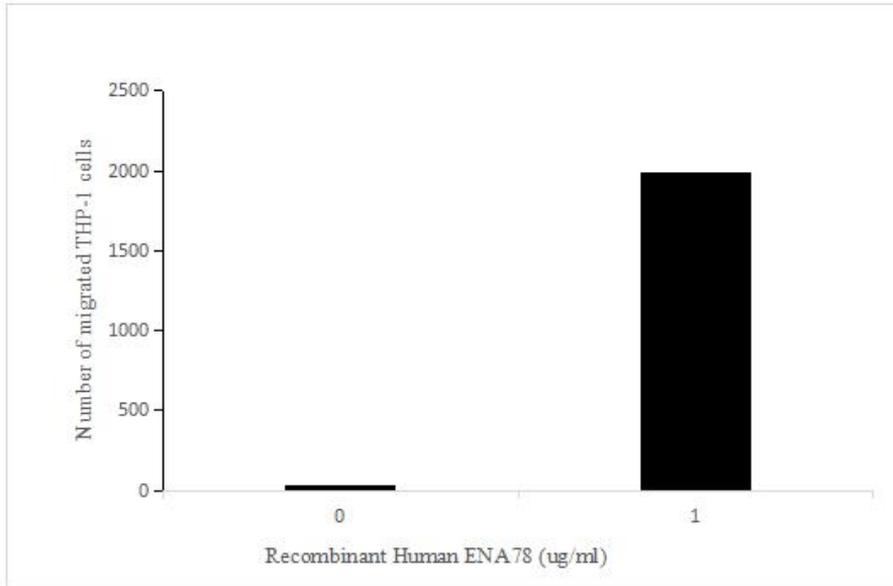
Epithelial Neutrophil Activating Peptide 78 (ENA-78) is a member of the CXC subfamily of chemokines. Full-length ENA-78 is 114 amino acids (aa) in length with a predicted molecular weight of 12 kDa. ENA-78 is expressed by many immune cells, such as macrophages, eosinophils, as well as non-immune cells including mesothelial cells, and fibroblasts. Soluble ENA-78 potently chemoattracts T cells and monocytes, while the cell-bound chemokine promotes strong adhesion of leukocytes to activated endothelial cells, where it is primarily expressed. Thus, chemotaxis assay used 24-well microchemotaxis system was undertaken to detect the chemotactic effect of ENA-78 on THP-1 the human monocytic cell line. Briefly, THP-1 cells were seeded into the upper chambers (150ul cell suspension,  $10^6$  cells/ml in RPMI 1640 with FBS free) and different concentrations of ENA-78 diluted with serum free RPMI 1640 was added in lower chamber with a polycarbonate filter (8 um pore size) used to separate the two compartments. After incubation at 37 °C with 5% CO<sub>2</sub> for 1h, 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 shows ENA-78 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. Statistical results of were shown in Figure 2. The optimum chemotaxis of ENA-78 occurs at 1ug/ml.



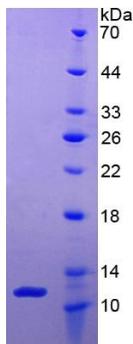
**Figure 1. The chemotactic effect of ENA-78 on THP-1 cells**

- (A)** THP-1 cells were seeded into the upper chambers and serum free RPMI 1640 with 1 ug/ml ENA-78 was added in lower chamber, then cells in lower chamber were observed at low magnification ( $\times 100$ ) after incubation at 37 °C for 1h;
- (B)** THP-1 cells were seeded into the upper chambers and serum free RPMI 1640 without ENA-78 was added in lower chamber, then cells in lower chamber were observed at low magnification ( $\times 100$ ) after incubation at 37 °C for 1h.



**Figure 2. The chemotactic effect of ENA-78 on THP-1 cells**

### **[ IDENTIFICATION ]**



15% SDS-PAGE

**Figure 3. SDS-PAGE**

**Sample: Active recombinant ENA78, 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.