

**APA389Mu02 100µg**  
**Active Complement Component 4a (C4a)**  
**Organism Species: *Mus musculus (Mouse)***  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Asn678~Arg753

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

**Purity:** >90%

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

**Buffer Formulation:** PBS, pH7.4, containing 0.01% SKL, 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:** 9.5

**Predicted Molecular Mass:** 9.8kDa

**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 ]**

NVN FQKAVSEKLG QYSSPDAKRC  
CQDGMTKLPM KRTCEQRAAR VPQQACREPF LSCCKFAEDL RRNQTRSQAHLAR

## **[ ACTIVITY ]**

Complement Component 4a (C4a) is a component of the complement system, which is a cleavage product of the complement C4 protein. C4a has been implicated in various inflammatory and immune responses. It acts as a chemoattractant, recruiting immune cells such as neutrophils and macrophages to the site of inflammation. Additionally, C4a can stimulate the release of pro-inflammatory cytokines and chemokines, further amplifying the immune response. Besides, the binding of MASP2 to C4a is an important step in the lectin pathway of the complement system, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse C4a and recombinant human MASP2. Briefly, C4a was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to MASP2-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-C4a pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37°C, 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  $\mu$ L stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant mouse C4a and recombinant human MASP2 was shown in Figure 1, the EC50 for this effect is 0.21  $\mu$ g/mL.

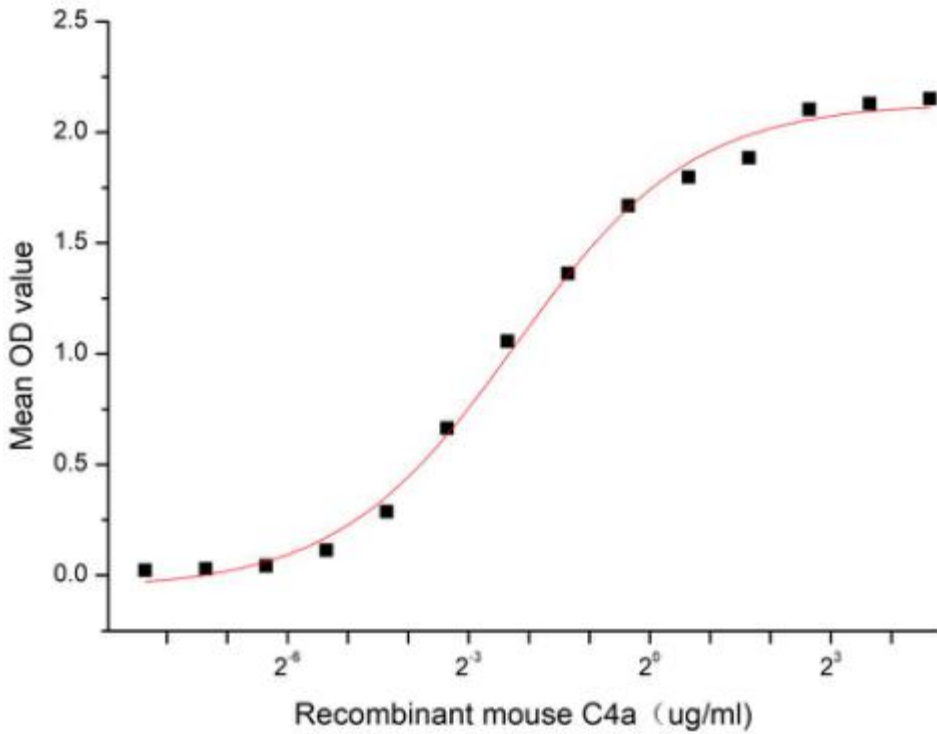


Figure 1. The binding activity of recombinant mouse C4a and recombinant human MASP2

## [ IDENTIFICATION ]

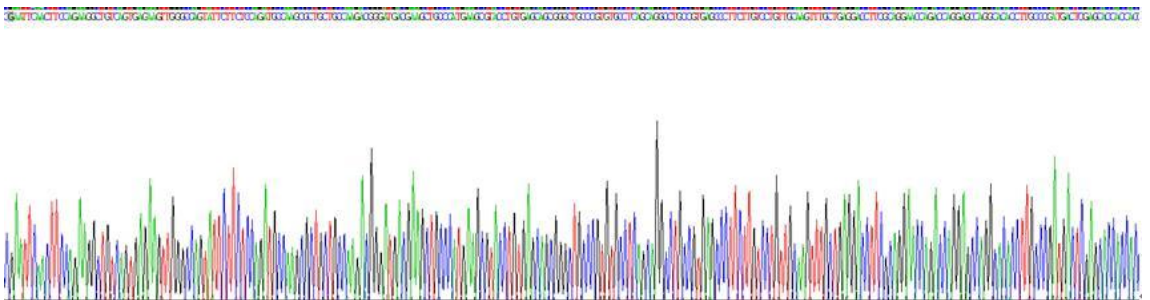
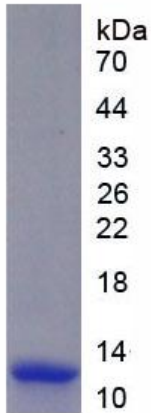


Figure 2. Gene Sequencing (extract)



**Figure 3. SDS-PAGE**

**Sample: Active recombinant C4a, 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.