

**APA861Hu01 100µg**  
**Active Complement Component 3 (C3)**  
**Organism Species: *Homo sapiens* (Human)**  
***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:** Leu1000~Glu1326

**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 .

**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:** 6.0

**Predicted Molecular Mass:** 43.4kDa

**Accurate Molecular Mass:** 43kDa 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 ]

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```
KHLIVTPSGC GEQNMIGMTP TVIAVHYLDE TEQWEKFGLE KRQGALELIK
KGYTQQLAFR QPSSAFAAFV KRAPSTWLTA YVVKVFS LAV NLI AID SQVL
CGAVKWLILE KQKPDGVFQE DAPVIHQEMI GGLRNNNEKD MALTA FVLIS
LQEAKDICEE QVNSLPGSIT KAGDFLEANY MNLQRSYTVA IAGYAL AQMG
RLKGPLL NKF LTTAKDKNRW EDPGKQLYNV EATSYALLAL LQLKDFDFVP
PVVRWLNEQR YGGGGYGSTQ ATFMVFQALA QYQKDAPDHQ ELNLDVSLQL
PSRSSKITHR IHWESASLLR SEETKE
```

## [ ACTIVITY ]

Complement Component 3 (C3) is a vital component of the complement system that plays a central role in immune response and inflammation. C3 is a  $\beta_2$  globulin synthesized by the liver, whose structure consists of two polypeptide chains,  $\alpha$  and  $\beta$ , and is the most abundant complement component in serum. It's been identified that C3 can interact with Complement Factor B (CFB), thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human C3 and recombinant mouse CFB. Briefly, CFB was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to C3-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-CFB 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. When Recombinant C3 is immobilized at 2 ug/mL (100 uL/well), the concentration of CFB that produces

50% optimal binding response is found to be approximately 5.96 ug/mL.

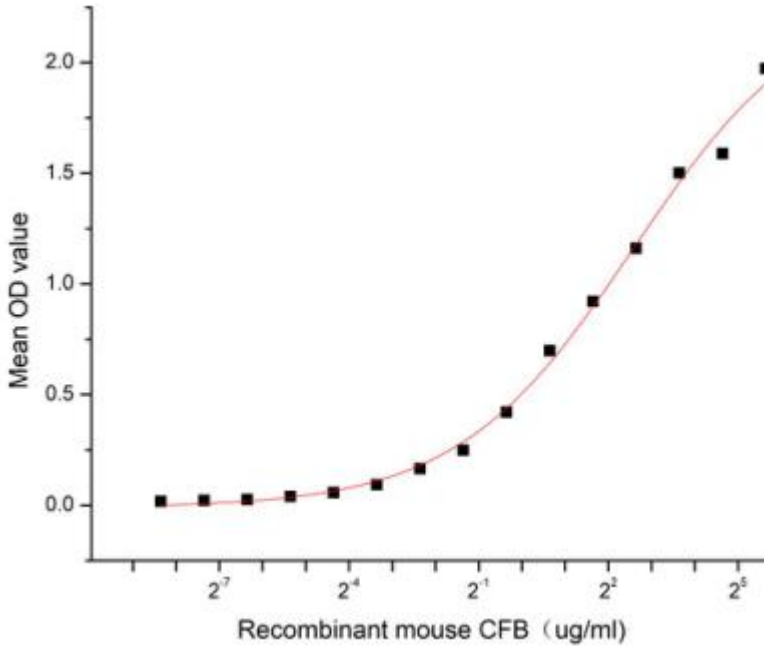


Figure 1. The binding activity of recombinant human C3 and recombinant mouse CFB

**[ IDENTIFICATION ]**

GGATCGAATTCTGAMGACCTCATTGTGACCCCTCGGGCTCGGGGACAGACATGATCGGATGAGGCCACGGTCATCCCTGTGCATTACCTGGATGAAAGGACAGCTGGGAGAAATTCCGCTTAGAGAGAGCCAGGGGACCTTGGAGCTCATCAGAGAGGGGTACACCCAGCAGCTGGG

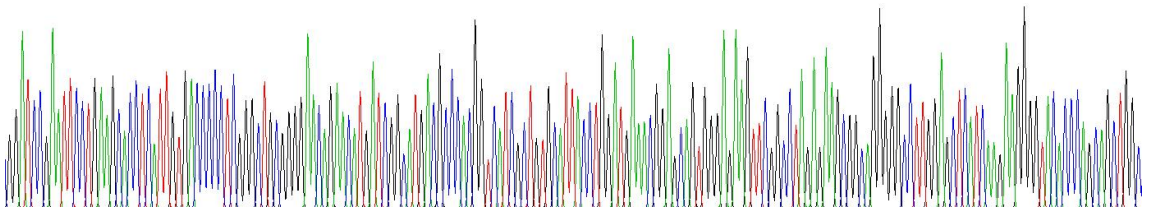
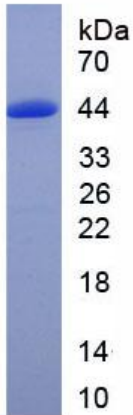


Figure 2. Gene Sequencing (extract)



**Figure 3. SDS-PAGE**

**Sample: Active recombinant C3, 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.