

**APB620Hu01 100µg**  
**Active C4 Binding Protein Alpha (C4BPα)**  
**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:** Gln548~Leu597

**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:** 7.1kDa

**Accurate Molecular Mass:** 7kDa 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 ]**

QVL

TGKRLMQCLP NPEDVKMALE VYKLSLEIEQ LELQRDSARQ STLDKEL

## **[ ACTIVITY ]**

C4BP $\alpha$ , also known as C4b-binding protein alpha chain or C4BP $\alpha$ , is a subunit of the complement factor C4b-binding protein (C4BP), which plays a crucial role in the regulation of the complement system, a part of the immune system that helps to defend the body against infection. C4BP $\alpha$  is part of a heterodimeric protein complex that consists of two chains, the alpha chain (C4BP $\alpha$ ) and the beta chain (C4BP $\beta$ ). It can bind to C4b and C3b, thereby inhibiting the formation of the C3 convertase and preventing excessive complement activation. Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human C4BP $\alpha$  and recombinant mouse C4b. Briefly, C4BP $\alpha$  was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to C4b-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-C4BP $\alpha$  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 human C4BP $\alpha$  and recombinant mouse C4b was shown in Figure 1, the EC<sub>50</sub> for this effect is 0.01  $\mu$ g/mL.

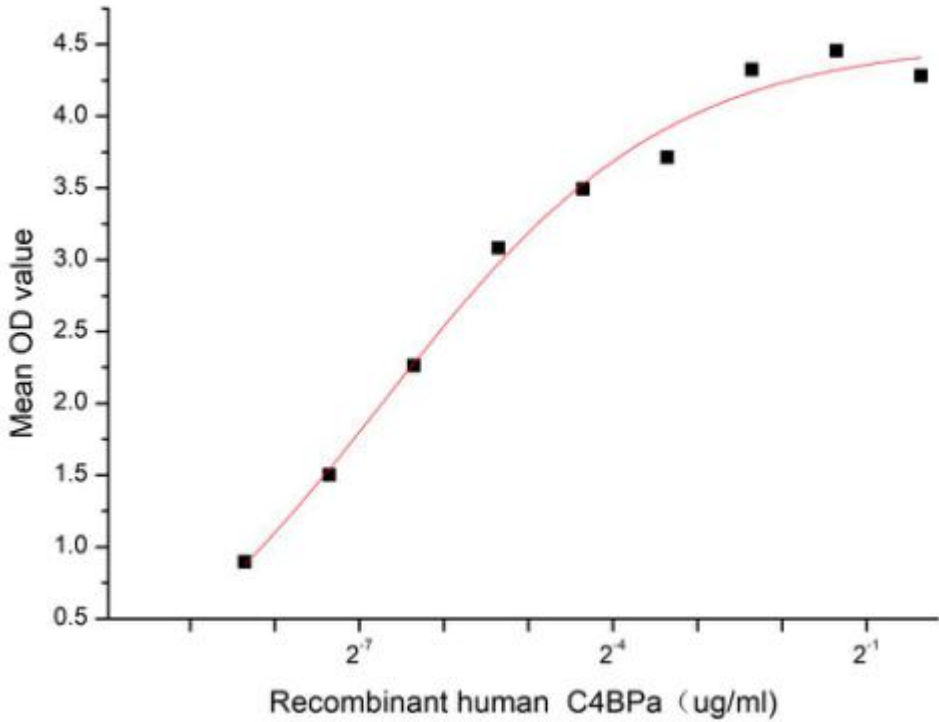


Figure 1. The binding activity of recombinant human C4BPα and recombinant mouse C4b

[ IDENTIFICATION ]

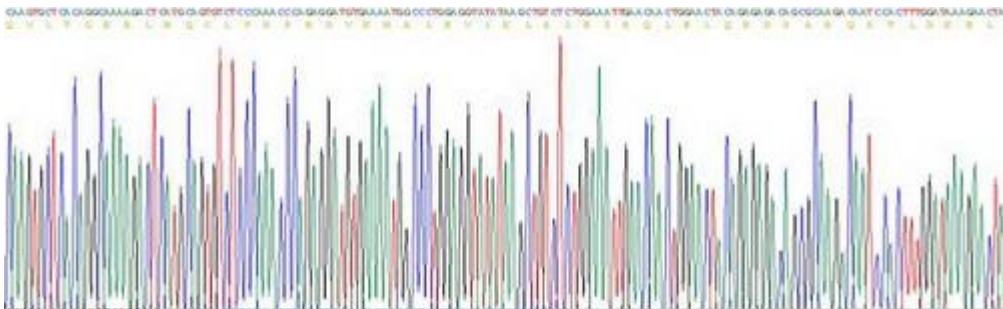
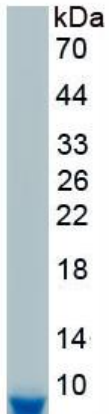


Figure 2. Gene Sequencing (extract)



**Figure 3. SDS-PAGE**

**Sample: Active recombinant C4BPα, 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.