

**APA704Hu61 100µg**  
**Active Apolipoprotein E (APOE)**  
**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:** Eukaryotic expression.

**Host:** 293F cell

**Residues:** Lys19~His317

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

**Purity:** >90%

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

**Buffer Formulation:** PBS, pH7.4, containing 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:** 5.3

**Predicted Molecular Mass:** 35.8kDa

**Accurate Molecular Mass:** 42kDa as determined by SDS-PAGE reducing conditions.

Phenomenon explanation:

The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

## **[ 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 ]**

```
KVEQAVETEPEPELRQQTTEWQSGQRWELALGRFWDYLRWVQTLSEQVQEELLSSQVTQELRALMDETMKELKAYKSELEEQLTPVAEE  
TRARLSKELQAAQARLGADMEDVCGRLVQYRGEVQAMLGQSTEELRVRLASHLRKLRKLLRDADDLQKRLAVYQAGAREGAERGLSA  
IRERLGPLVEQGRVRAATVGSAGQPLQERAQAWGERLRARMEEMGSRTRDRDLDEVKEQVAEVRAKLEEQAQQIRLQAEAFQARLKSW  
FEPLVEDMQRQWAGLVEKVQAAVGTSAAPVPSDNH
```

## **[ ACTIVITY ]**

Apolipoprotein E (APOE), a member of the apolipoprotein family, is a plasma protein that plays a key role in lipid metabolism and cholesterol transport. It binds and transports cholesterol and triglycerides, helping these lipid molecules move steadily through the blood. In addition, the combination of APOE and APOB can promote the binding of lipoprotein particles to cell surface receptors, so that cholesterol and triglycerides in lipoprotein particles can be absorbed by cells, thereby clearing lipids in the blood. Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human APOE and recombinant pig APOB. Briefly, biotin-linked APOE were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to APOB-coated microtiter wells and incubated for 1h at 37 °C . Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then 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 450

nm immediately. The binding activity of recombinant human APOE and recombinant pig APOB was shown in Figure 1, and this effect was in a dose dependent manner.

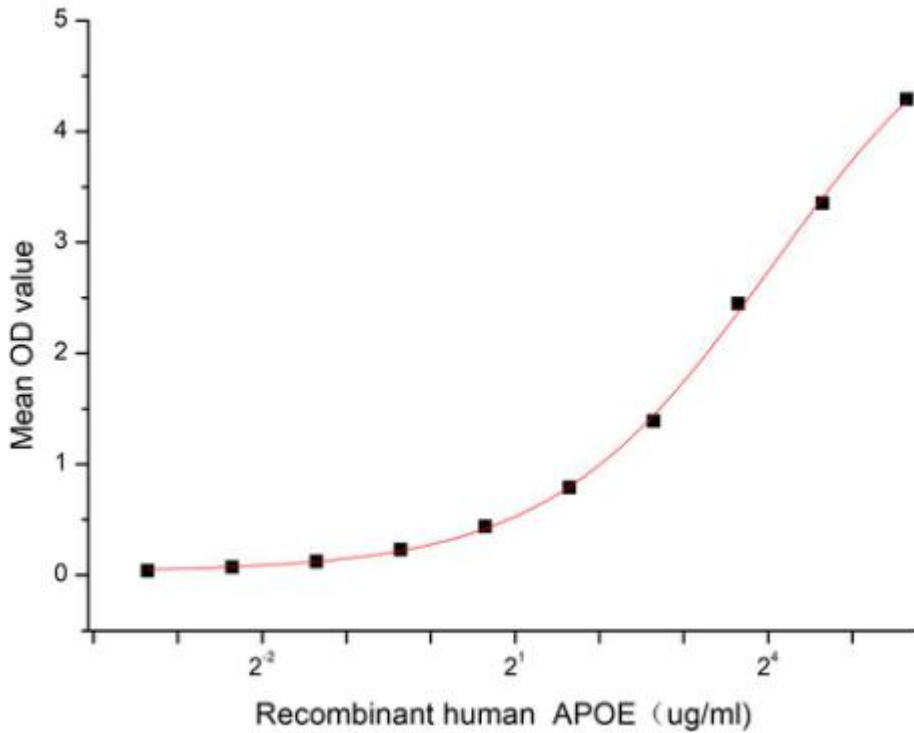
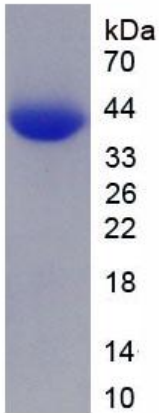


Figure 1. The binding activity of recombinant human APOE and recombinant pig APOB

[ **IDENTIFICATION** ]



**Figure 2. SDS-PAGE**

**Sample: Active recombinant APOE, 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.