APA604Hu61 5μg
Active Apolipoprotein A2 (APOA2)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

12th Edition (Revised in Aug, 2016)

[PROPERTIES]

Source: Eukaryotic expression.
Host: 293F cell
Residues: Gln24~Gln100
Tags: N-terminal His-tag
Purity: >95%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 5%Trehalose .
Original Concentration: 50μg/mL
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 5.9
Predicted Molecular Mass: 10.3kDa
Accurate Molecular Mass: 12&13.5&14kDa 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 ddH_2O to a concentration ≤0.05mg/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]

QAKEPCV ESLVSQYFQT VTDYGKDLME
KVKSPELQAE AKSYFEKSKE QLTPLIKKAG TELVNFLSYF VELGTQPATQ

[ACTIVITY]

Apolipoprotein A2 (APOA2) is a major protein component of serum HDL. It is produced by the liver and is involved in cholesteryl ester formation and cholesterol transport from tissues to the liver. Polymorphisms of APOA2 are associated with disorders of cholesterol and fatty acid metabolism. APOA2 can form disulfide-linked 17 kDa homodimers and heterodimers with other apolipoproteins. Mature human APOA2 shares 96% aa sequence identity with chimpanzee APOA2 and 48% - 66% aa sequence identity with bovine, equine, mouse and rat APOA2. A functional ELISA assay was conducted to detect the interaction of recombinant human APOA2 and recombinant rat APOC1. Briefly, APOC1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to APOA2-coated (1ug/ml, 100 ul/well) microtiter wells and incubated for 1h at 37℃.

Wells were washed with PBST and incubated for 1h with anti-APOC1 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant human APOA2 and recombinant rat APOC1 was shown in Figure 1, the concentration of APOC1 that produces 50% optimal binding response is found to be approximately 87.2 ng/mL.

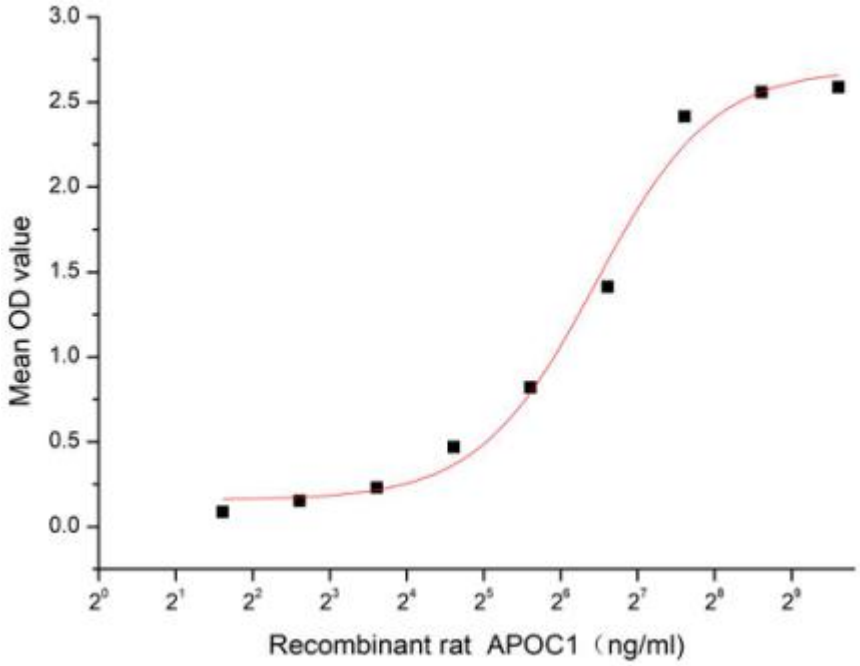

Figure 1. The binding activity of recombinant human APOA2 and recombinant rat APOC1

[IDENTIFICATION]

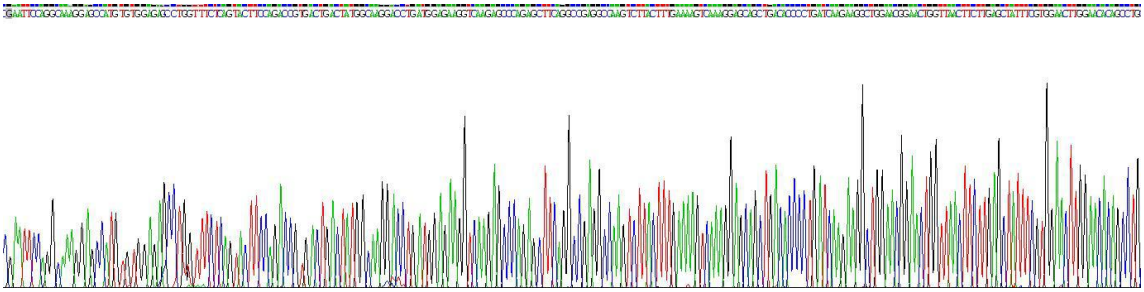

Figure 2. Gene Sequencing (extract)

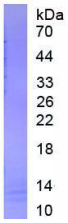

Figure 3. SDS-PAGE

Sample: Active recombinant APOA2, 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.