APB967Ra01 100μg
Active Apolipoprotein A4 (APOA4)
Organism Species: *Rattus norvegicus (Rat)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Glu21~Ser391
Tags: N-terminal His and GST Tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .
Original Concentration: 200μg/mL
Applications: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 5.1
Predicted Molecular Mass: 75.4kDa
Accurate Molecular Mass: 75kDa 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 2-8ºC for one month.
Aliquot and store at -80ºC 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 37ºC 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]

EVTSDQVANV MWDYFTQLSN NAKEAVEQLQ
KTDVTQQLNT LFQDKLGNIN TYADDLQNKL VPFAVQLSGH LTKETERVRE
EIQKELEDLR ANMMPHANKV SQMFGDNVQK LQEHLRPYAT DLQAQINAQT
QDMKRQLTPY IQRMQTTIQD NVENLQSSMV PFANELKEKF NQNMEGLKGQ
LTPRANELKA TIDQNLEDLR SRLAPLAEGV QEKLNHQMEG LAFQMKKNAE
ELQTKVSTNI DQLQKNLAPL VEDVQSKLKG NTEGLQKSLE DLNKQLDQQV
EVFRRAVEPL GDKFNMALVQ QMEKFRQQLG SDSGDVESHL SFLEKNLREK
VSSFMSTLQK KGSPDQPLAL PLPEQVQEQV QEQVQPKPLE S

[ACTIVITY]

Human apolipoprotein A4 (APOA4), a 46 kDa exchangeable class A apolipoprotein predominantly synthesized in small intestinal enterocytes, distributes across triglyceride-rich chylomicrons, high-density lipoprotein (HDL) particles, and circulating lipoprotein-free plasma fractions. Structurally defined by tandem amphipathic α-helical repeat domains, it mediates reverse cholesterol transport, activates lecithin-cholesterol acyltransferase, governs postprandial lipid and glucose homeostasis, and suppresses vascular oxidative stress, exerting potent anti-atherosclerotic and endothelial-protective bioactivities. APOA4 interacts with apolipoprotein A2 (APOA2) via helical domain association on HDL surfaces; they co-assemble into lipoprotein complexes and share endothelial binding sites, jointly modulating HDL structural stability and metabolic turnover.

Thus a functional ELISA assay was conducted to detect the interaction of recombinant APOA4 and recombinant APOA2. Briefly, APOA4 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μL were then transferred to APOA2-coated microtiter wells and incubated for 1h at 37℃. Wells

were washed with PBST and incubated for 1h with anti-APOA4 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 APOA4 and recombinant APOA2 was shown in Figure 1, the EC50 for this effect is 0.142 μg/mL.

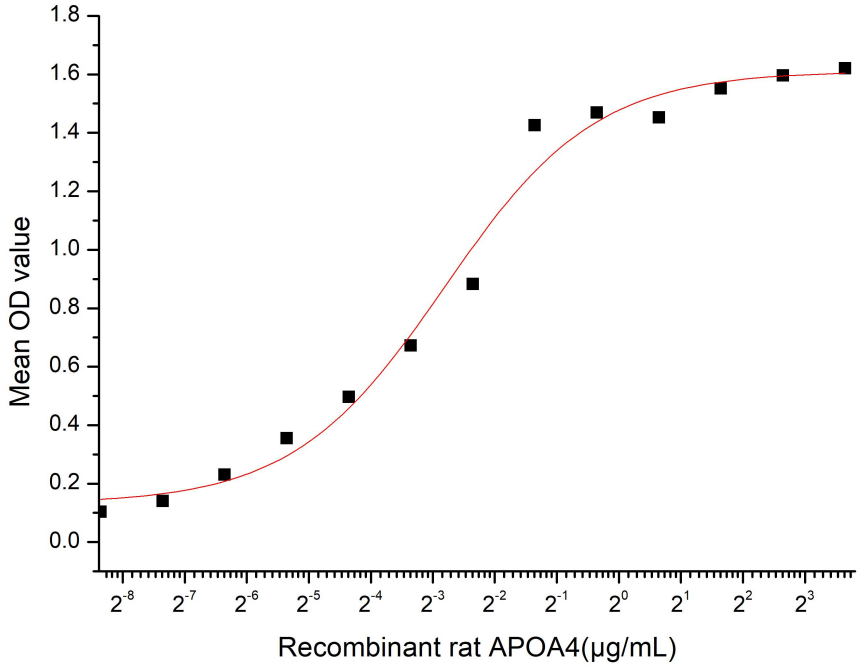

Figure 1. The binding activity of recombinant APOA4 and APOA2

[IDENTIFICATION]

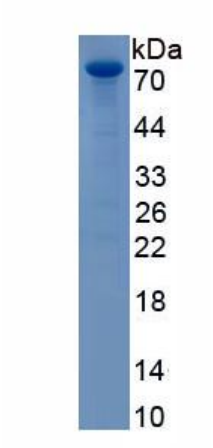

Figure 2. SDS-PAGE

Sample: Active recombinant APOA4, Rat

[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.