



APD207Hu01 100µg

Active Complement Component 1, Q Subcomponent A (C1qA)

Organism Species: *Homo sapiens* (Human)

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: Ala28~Ala245

Tags: N-terminal His-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: 250µg/mL

Applications: Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 9.6

Predicted Molecular Mass: 26.8kDa

Accurate Molecular Mass: 30kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in ddH₂O 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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APD GKKGEAGRPG RRGRLGLKGE
QGEFGAPGIR TGIQGLKGDQ GEPGSPGNPG KVGYPGSPGP LGARGIPGIK
GTKGSPGNIK DQPRPAFSAI RRNPPMGGNV VIFDTVITNQ EEPYQNHSGR
FVCTVPGYYY FTFQVLSQWE ICLSIVSSSR GQVRRSLGFC DTTNKGLFQV
VSGGMVLQLQ QGDQVWVEKD PKKGHIYQGS EADSVFSGFL IFPSA
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[ACTIVITY]

Complement Component 1, Q Subcomponent A (C1qA) is a subunit of the C1q complex in the complement system. It has a crucial role in recognizing pathogens and immune complexes. Structurally, it contributes to the overall architecture of C1q, enabling it to interact with various ligands. Functionally, it is essential for initiating the classical complement pathway. Binding of C1qA to C1r activates C1r, triggering the classical complement cascade for pathogen elimination and immune response regulation. Thus a functional ELISA assay was conducted to detect the interaction of recombinant human C1qA and recombinant mouse C1r. Briefly, C1qA was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to C1r-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-C1qA 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 µL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant human C1qA and recombinant mouse C1r was shown in Figure 1, the EC50 for this effect is 0.022ug/mL.

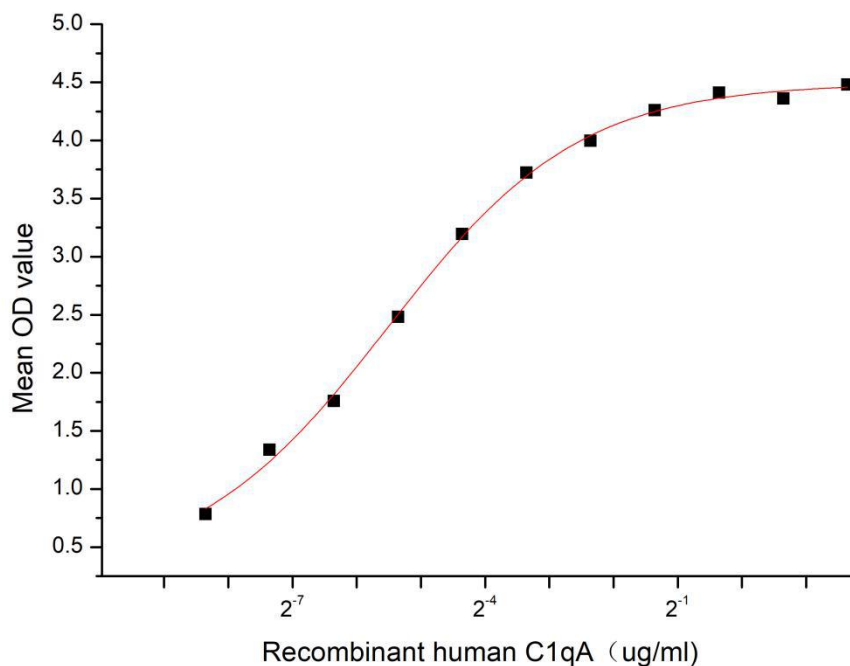


Figure 1. The binding activity of recombinant human C1qA and recombinant mouse C1r

[IDENTIFICATION]

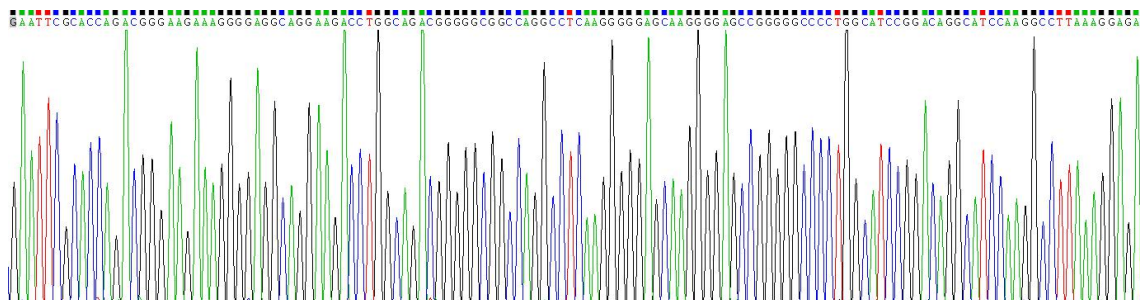


Figure 2. Gene Sequencing (extract)

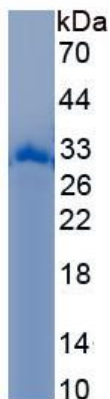


Figure 3. SDS-PAGE

Sample: Active recombinant C1qA, 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.