APA389Hu01 100μg
Active Complement Component 4a (C4a)
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: Asn680~Arg756
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% 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: 8.4
Predicted Molecular Mass: 38.8kDa
Accurate Molecular Mass: 42kDa 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]

N VNFQKAINEK LGQYASPTAK
RCCQDGVTRL PMMRSCEQRA ARVQQPDCRE PFLSCCQFAE SLRKKSRDKG
QAGLQR

[ACTIVITY]

Complement Component 4a (C4a) is a component of the complement system, which is a cleavage product of the complement C4 protein. C4a has been implicated in various inflammatory and immune responses. It acts as a chemoattractant, recruiting immune cells such as neutrophils and macrophages to the site of inflammation. Additionally, C4a can stimulate the release of pro-inflammatory cytokines and chemokines, further amplifying the immune response. C4a and C4b are the two subunits of C4, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human C4a and recombinant mouse C4b. Briefly, C4a was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to C4b-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-C4a 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 450/630 nm immediately. The binding activity of recombinant human C4a and recombinant mouse C4b was shown in Figure 1,and this effect was in a dose dependent manner.

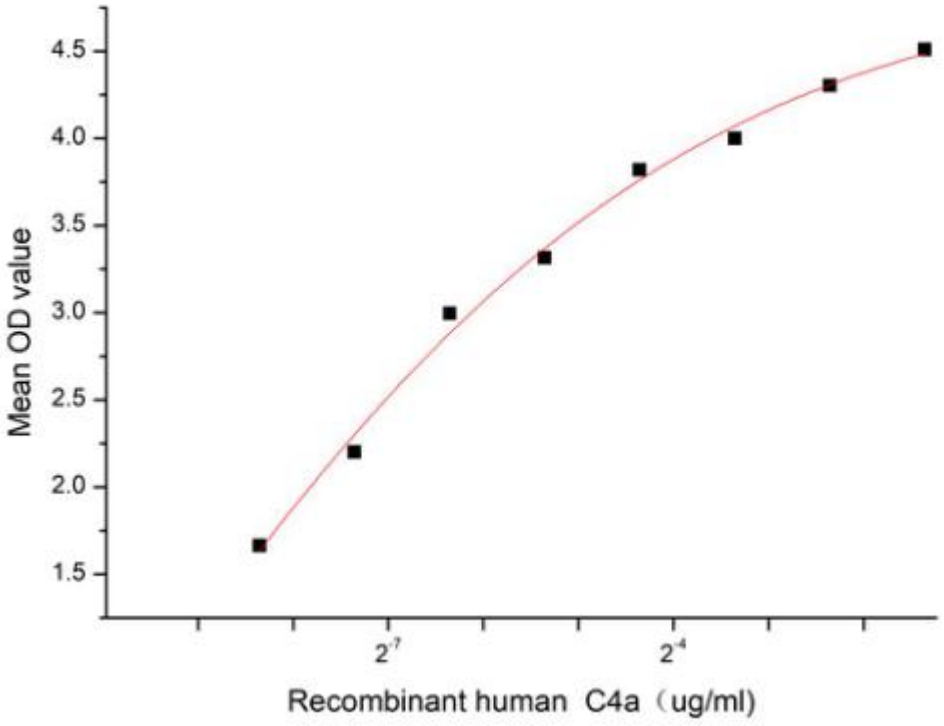

Figure 1. The binding activity of recombinant human C4a and recombinant mouse C4b

[IDENTIFICATION]

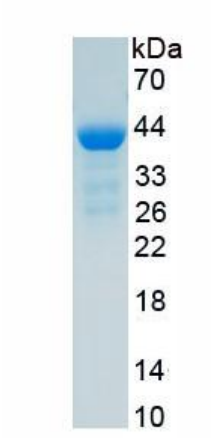

Figure 2. SDS-PAGE

Sample: Active recombinant C4a, 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.