

APC011Si02 100µg
Active Complement Factor B (CFB)
Organism Species: *Rhesus monkey (Simian)*
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: Thr26~Leu763

Tags: N-terminal His-tag

Purity: >80%

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: 7.5

Predicted Molecular Mass: 86.6kDa

Accurate Molecular Mass: 87kDa 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 2-8°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**]

TPLSSAQPQGSCLLEGVEIKGGSFRLLQEGQALEYVCPSPGFYPYPVQTRTRCRSTGWSWTLQT
QDRKTVKKAECRAIRCPRPQDFENGEYRPRSPYYNVSDIEISFHCYDGYTLRGSANRTCQVN
GRWSGQTAICDNGAGYCSNPGIPIGTRKVGSRYLEDSVTYHCSRGLTLRGSQRRTCQEGG
SWSGTEPSCQDSFMYDTPQEVAAFLSSLTETIEGVDAEDGHSPGEQQKRRIILDPSGSMNI
YVLVDGSDSIGAGNFTGAKKCLVNLIEKVASYGVKPRYALVTYATYPRIWVKVSDQESSNADW
VTKKLSEINYEDHKLKSGTNTKRALQAVYSMMSWPEDIPPEGWNRTRHVIIIMTDGLHNM
GGDPITVIDEIRDLLYIGKDRKNPREDYLDVYVFGVGLVDQVNINALASKKDNEQHVFKVK
DMENLEDVFFQMIDESQSLSLCGMVWEHSGKTDYHKQPWQAKISVTRPSKGHESCMGAV
VSEYFVLTAAHCFVDDKEHSIKVSVGKKRDLEIEKVLHFDYNDYISGKKEAGIPEFYDYDVALIK
LKNKLNYPDPTIRPICLPCTEGTTRALRLPPTTTCQQQKEELLPAQDIKALFVSEEEKLTRKEVY
IKNGDKKGCERDAQYAPGYDKVKDISEVVTFRFLCTGGVSPYADPNTCRGDSGGPLIVHKR
SRFIQVGVISWGVVDVCKNQKRQKQVPAHARDFHVNLFQVLPWLKEKLQDEDLGFL

[**ACTIVITY**]

Complement factor B (CFB), a 95-kDa protein, is a crucial catalytic element of the alternative pathway (AP) of complement. Upon cleavage by Complement Factor D (CFD), CFB splits into fragments Ba (inactive) and Bb, the latter forming the active C3 convertase (C3bBb). This enzyme amplifies complement activation by cleaving C3 into C3a/C3b, driving inflammation, opsonization, and membrane attack complex formation. CFB deficiency disrupts immune defense, linking it to infections and autoimmune disorders like atypical hemolytic uremic syndrome (aHUS). Thus a functional ELISA assay was conducted to detect the interaction of recombinant human CFB and recombinant mouse CFD. Briefly, CFB was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to CFD-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-CFB 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 simina CFB and recombinant mouse CFD was shown in Figure 1, the EC50 for this effect is 0.015 ug/mL.

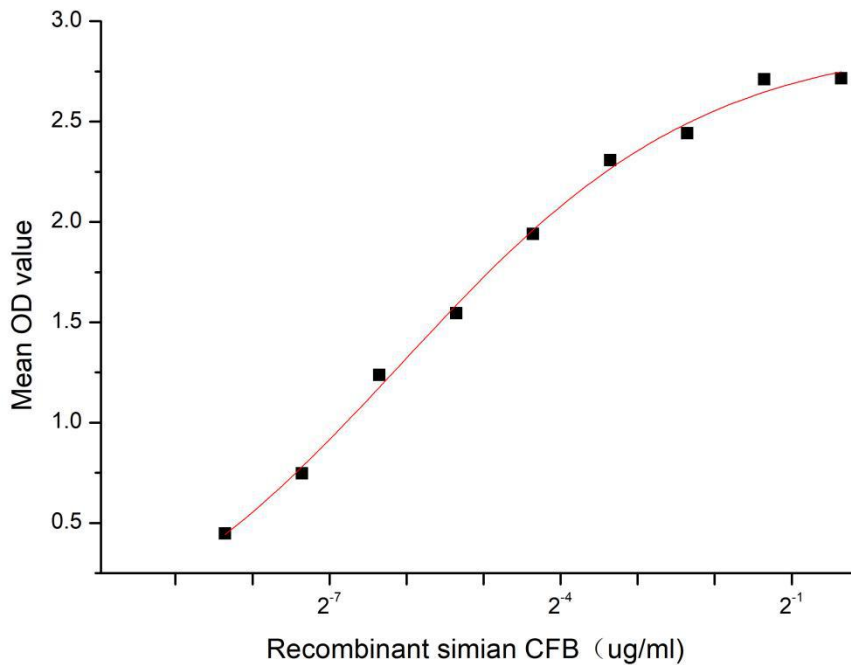


Figure 1. The binding activity of Recombinant simian CFB and recombinant mouse CFD

[IDENTIFICATION]

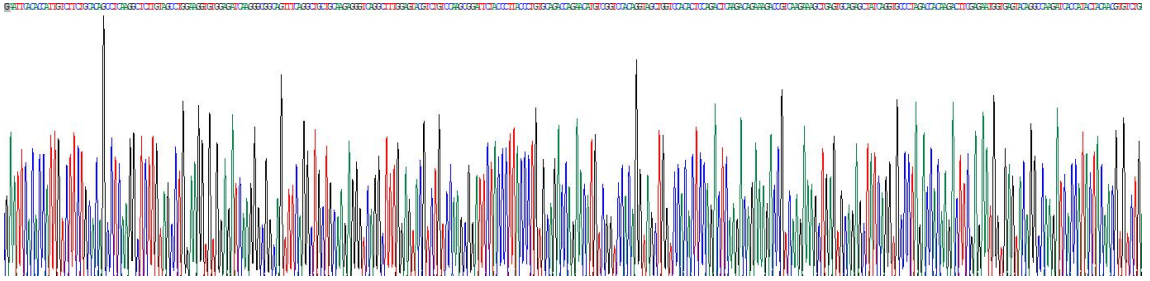


Figure 2. Gene Sequencing (extract)

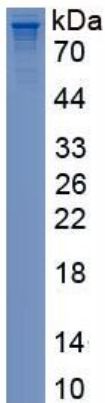


Figure 3. SDS-PAGE

Sample: Active recombinant CFB, Simian

[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.