APA468Ra01 100μg
Active Cluster Of Differentiation 55 (CD55)
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: Pro254~Glu372
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% SKL, 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: 11.0
Predicted Molecular Mass: 14.5kDa
Accurate Molecular Mass: 16kDa 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]

PHESTLI NFPSTRAPLS HKPTTVKVPG TRVKPTSHKP TEVKVPATQH VPVSKTTVRH PTRTSKDRGE SNSGGDHFIY GFVAVIVTID SIILIKTLWW TILSSNRSSD LQGKKKRENV PE

[ACTIVITY]

Cluster of Differentiation 55 (CD55), also known as Decay Accelerating Factor (DAF), is a glycosylphosphatidylinositol (GPI)-anchored membrane protein that belongs to the RCA (regulators of complement activation) family and is expressed on all cells that are bathed in plasma, such as blood cells and endothelial cells. CD55 functions as a complement regulator, accelerating the decay of C3 and C5 convertases, thereby inhibiting the formation of the membrane attack complex (MAC) and preventing complement-mediated cell lysis. It plays a crucial role in protecting host cells from complement damage and is involved in various physiological and pathological processes, including immune complex clearance and inflammation. Besides, Complement Component 2 (C2) has been identified as an interactor of CD55, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant rat CD55 and recombinant rat C2. Briefly, CD55 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to C2-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-CD55 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 rat CD55 and recombinant rat C2 was shown in

Figure 1, the EC50 for this effect is 0.026 ug/mL.

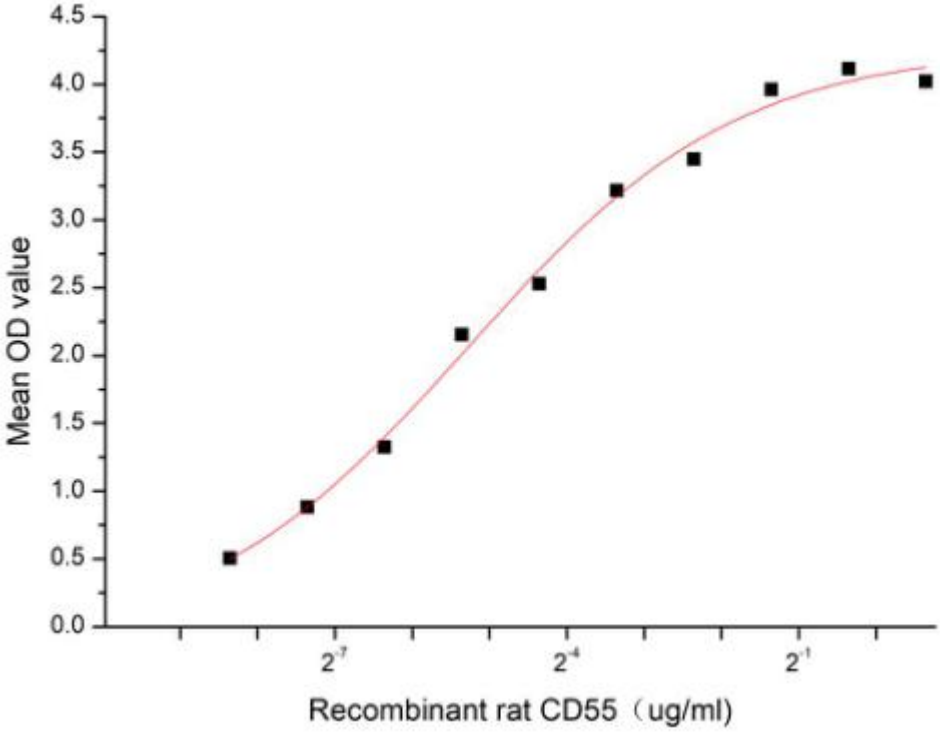

Figure 1. The binding activity of recombinant rat CD55 and recombinant rat C2

[IDENTIFICATION]

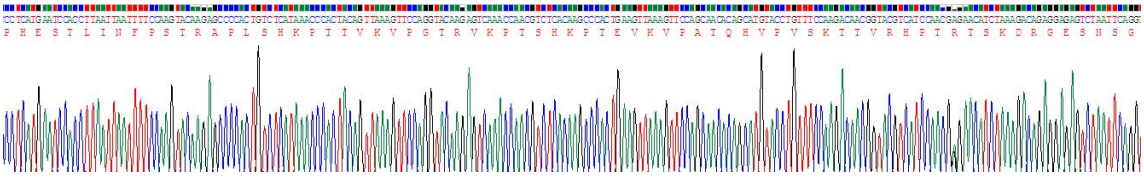

Figure 2. Gene Sequencing (extract)

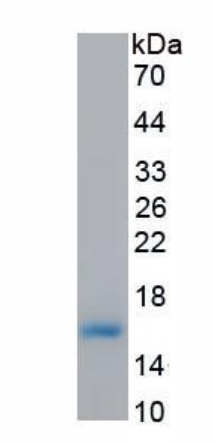

Figure 3. SDS-PAGE

Sample: Active recombinant CD55, 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.