APB167Ra61 100μg
Active Cluster Of Differentiation 4 (CD4)
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: Eukaryotic expression.
Host: 293F cell
Residues: Lys28~Thr394
Tags: N-terminal His Tag and C-terminal Fc Region of Mouse IgG1
Purity: >95%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 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: 9.2
Predicted Molecular Mass: 66.0kDa
Accurate Molecular Mass: 75kDa as determined by SDS-PAGE reducing conditions.
Phenomenon explanation:
The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

[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]

KTVVLGKEGGSAELPCESTSRRSASFAWKSSDQKTILGYKNKLLIKGSLELYSRFDSRKNAWERGSF
PLIINKLRMEDSQTYVCELENKKEEVELWVFRVTFNPGTRLLQGQSLTLILDSNPKVSDPPIECKH
KSSNIVKDSKAFSTHSLRIQDSGIWNCTVTLNQKKHSFDMKLSVLGFASTSITAYKSEGESAEFSFPL
NLGEESLQGELRWKAEKAPSSQSWITFSLKNQKVSVQKSTSNPKFQLSETLPLTLQIPQVSLQFAG
SGNLTLTLDRGILYQEVNLVVMKVTQPDSNTLTCEVMGPTSPKMRLILKQENQEARVSRQEKVI
QVQAPEAGVWQCLLSEGEEVKMDSKIQVLSKGLNQT

[ACTIVITY]

Cluster of Differentiation 4 (CD4) is a transmembrane glycoprotein expressed primarily on helper T cells, regulatory T cells, and dendritic cells. As a key immune checkpoint molecule, it interacts with MHC class II molecules to modulate T cell activation, proliferation, and cytokine secretion, playing pivotal roles in adaptive immunity, inflammation, and immune homeostasis. CD4 binds to CXCR4, a G protein-coupled chemokine receptor, facilitating cell migration and signaling crosstalk in immune responses and tissue homeostasis.Briefly, CXCR4 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to CD4-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-CXCR4 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.Measured by its binding ability in a functional ELISA. When Recombinant CD4 is Immobilized at 2 μg/mL(100 uLwell), the concentration of CXCR4 that produces 50% optimal bindingresponse is found to be approximately 3.97 μg/mL.

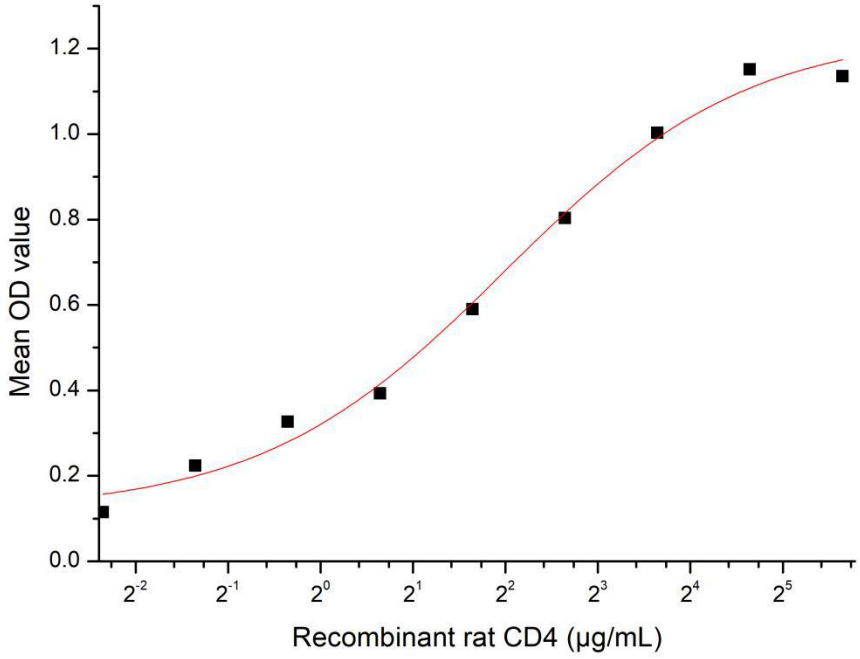


Figure 1. The binding activity of recombinant CXCR4 and CD4

[IDENTIFICATION]

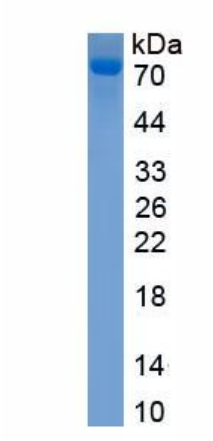


Figure 2. SDS-PAGE

Sample: Active recombinant CD4, 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.