

APB576Hu61 100µg
Active Cluster Of Differentiation 2 (CD2)
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: Eukaryotic expression.

Host: 293F cell

Residues: Lys25~Asp209

Tags: N-terminal His-tag

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: Cell culture; Activity Assays.

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

Predicted isoelectric point: 8.9

Predicted Molecular Mass: 22.8kDa

Accurate Molecular Mass: 33-40kDa 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]

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                KEITNA LETWGALGQD INLDIPSFQM  
SDDIDDIKWE KTSDDKKKIAQ FRKEKETFKE KDTYKLFKNG TLKIKHLKTD  
DQDIYKVSIIY DTKGKNVLEK IFDLKIQERV SKPKISWTCI NTTLTCEVMN  
GTDPELNLYQ DGKHLKLSQR VITHKWTTSL SAKFKCTAGN KVSKESSVEP  
VSCPEKGLD
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[ACTIVITY]

Cluster of Differentiation 2 (CD2) is a surface antigen found on all peripheral blood T-cells. CD2 functions as an activator of T lymphocytes and thymocytes. Mature human CD2 consists of a 185 amino acid (aa) extracellular domain (ECD) with an Ig-like V-type and an Ig-like C2 type domain, a 26 aa transmembrane segment, and a 116 aa cytoplasmic tail. Cluster of Differentiation 5 (CD5) has been identified as an interactor of CD2, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human CD2 and recombinant human CD5. Briefly, CD2 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to CD5-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-CD2 pAb, then aspirated and washed 3 times. After incubation with HRP

labelled secondary antibody, wells were aspirated and washed 3 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 nm immediately. The binding activity of recombinant human CD2 and recombinant human CD5 was shown in Figure 1, the EC50 was 1.88 µg/ml.

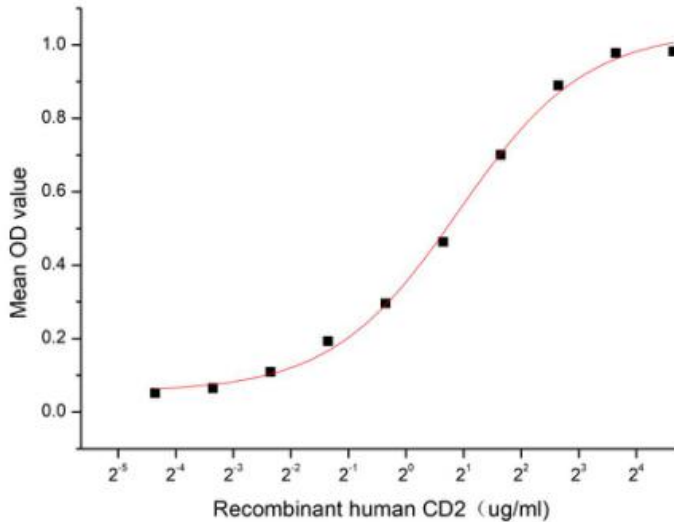


Figure 1. The binding activity of recombinant human CD2 with recombinant human CD5

[IDENTIFICATION]

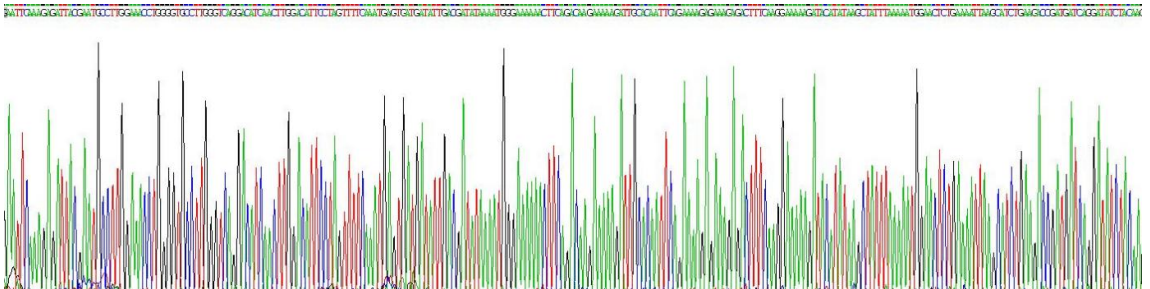


Figure 2. Gene Sequencing (extract)

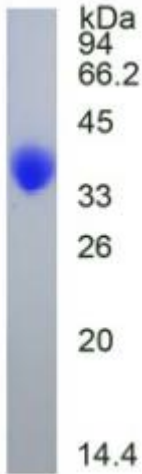


Figure 3. SDS-PAGE

Sample: Active recombinant CD2, 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.