

APB099Hu61 100µg
Active Cluster Of Differentiation 8a (CD8a)
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: Ser22~Val235

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.

Applications: Cell culture; Activity Assays.

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

Predicted isoelectric point: 9.7

Predicted Molecular Mass: 21.0kDa

Accurate Molecular Mass: 30kDa 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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SQFRVSPLD RTWNLGETVE LKCQVLLSNP  
TSGCSWLFQP RGAASPTFL LYLSQNKPKA AEGLDTQRF S GKRLGDTFVL  
T LSDFRRENE GYFCSALSN SIMYFSHFVP VFLPAKPTTT P APRPPTPAP  
T IASQPLSLR PEACRPAAGG AVHTRGLDFA CDIIYIWAPLA GTCGVLLLLSL  
VITLYCNHRN RRRVCKCPRP VVKSGDKPSL SARYV
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[ACTIVITY]

Cluster Of Differentiation 8a (CD8a) is an approximately 32-34 kDa cell surface glycoprotein found on cytotoxic T lymphocytes. It belongs to the immunoglobulin family and is a key component of the immune system, particularly in the context of T-cell biology. Its interaction with MHC class I molecules is crucial for T-cell development, activation, and the mediation of the immune response against infected or cancerous cells. CD4 and CD8 molecules play a key role in the interaction between T cells and antigen presenting cells (APCs), thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human CD8a and recombinant human CD4. Briefly, biotin-linked CD8a were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to CD4-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then 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 nm immediately. The binding activity of recombinant human CD8a and recombinant human CD4 was shown in Figure 1, the EC50 for this effect is 0.59 $\mu\text{g}/\text{mL}$.

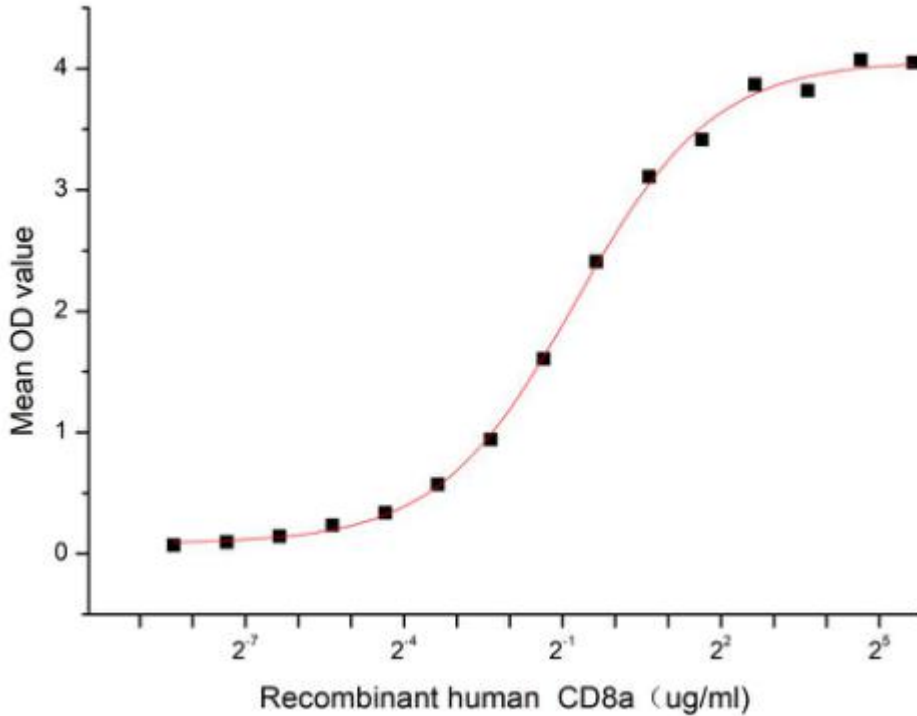


Figure 1. The binding activity of recombinant human CD8a and recombinant human CD4

[IDENTIFICATION]

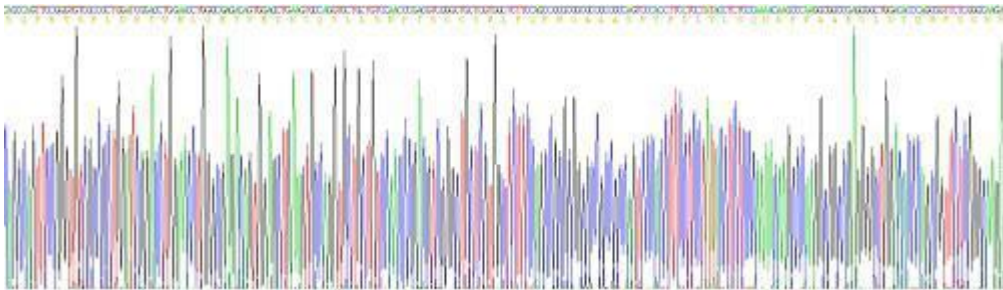


Figure 2. Gene Sequencing (extract)

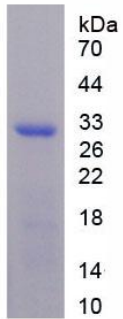


Figure 3. SDS-PAGE

Sample: Active recombinant CD8a, 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.