

APA670Mu01 100µg

Active Homing Associated Cell Adhesion Molecule (HCAM)

Organism Species: *Mus musculus (Mouse)*

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: Gln23~Pro258

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% SKL, 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: 5.1

Predicted Molecular Mass: 29.9kDa

Accurate Molecular Mass: 38kDa 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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QIDLNVTC RYAGVFHVEK NGRYSISRTE  
AADLCQAFNS TLPTMDQMKL ALSKGFETCR YGFIEGNVVI PRIHPNAICA  
ANHTGVYILV TSNTSHYD TY CFNASAPPEE DCTSVTDLPN SFDGPVTITI  
VNRDGT RYSK KGEYRTHQED IDASNIIDDD VSSGSTIEKS TPEGYILHTY  
LPTEQPTGDQ DDSFFIRSTL ATIASTVHSK SHAAAQKQNN WIWSWFGNSQ  
STTQTQEP
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[ACTIVITY]

Homing Associated Cell Adhesion Molecule (HCAM), also known as CD44, is a ubiquitous multistructural and multifunctional cells surface adhesion molecule involved in cell-cell and cell-matrix interactions. CD44 is broadly expressed, including in the membranes of B cells, granulocytes, monocytes, and erythrocytes as well as on many thymocytes and mature T cells, besides it is highly expressed in many cancers and regulates metastasis via recruitment of CD44 to the cell surface. This protein is a receptor for hyaluronic acid (HA) and can also interact with other ligands, such as osteopontin, collagens, and matrix metalloproteinases (MMPs). Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse HCAM and biotinylated hyaluronan (HA). Briefly,

biotin-linked HA was diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to HCAM-coated microtiter wells and incubated for 2h at 37 °C . Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 1 hour, 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 450/630 nm immediately. The binding activity of recombinant mouse HCAM and biotinylated HA was shown in Figure 1, and this effect was in a dose dependent manner.

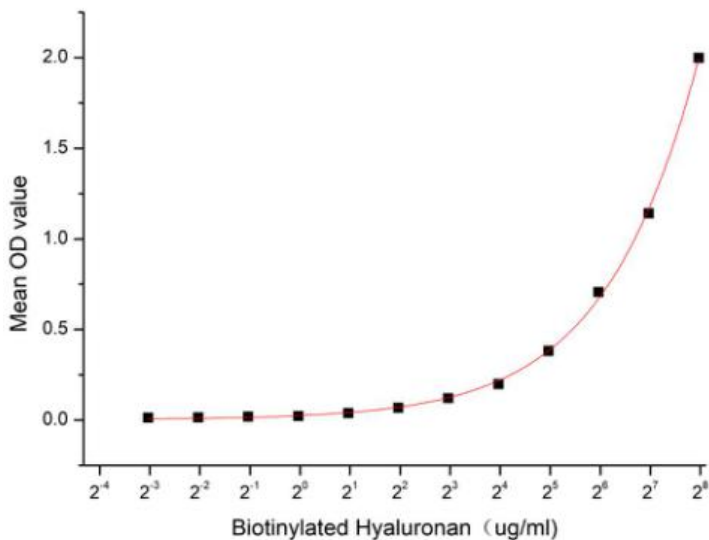


Figure 1. The binding activity of recombinant mouse HCAM and biotinylated HA

[IDENTIFICATION]

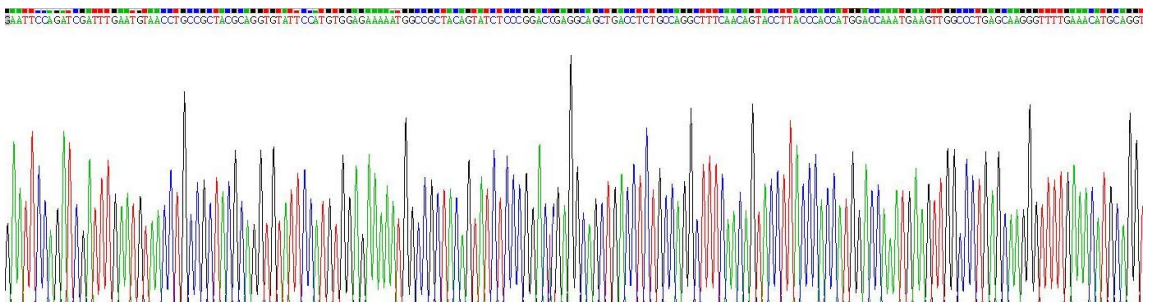


Figure 2. Gene Sequencing (extract)

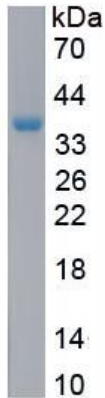


Figure 3. SDS-PAGE

Sample: Active recombinant HCAM, Mouse

[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.