

**APA670Ra01 100µg**  
**Active Homing Associated Cell Adhesion Molecule (HCAM)**  
**Organism Species: *Rattus norvegicus (Rat)***  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Gln24~Val182

**Tags:** N-terminal His-tag

**Purity:** >95%

**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:** 4.5

**Predicted Molecular Mass:** 21.4kDa

**Accurate Molecular Mass:** 22kDa 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 2-8°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 ]**

```
QIDLNIT CRYAGVFHVE KNGRYSISRT EAADLCEAFN TTLPTMAQME  
LALRKGFTC RYGFIEGHVV IPRIHPNAIC AANNTGVYIL LASNTSHYDT  
YCFNASAPLE EDCTSVDLP NSFDGPVTIT IVNRDGTTRY S KKGEYRTHQE  
DIDASNIIDE DV
```

## **[ 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 rat HCAM and biotinylated hyaluronan (HA). Briefly, biotin-linked HA were 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 rat HCAM and biotinylated HA

was shown in Figure 1, and this effect was in a dose dependent manner.

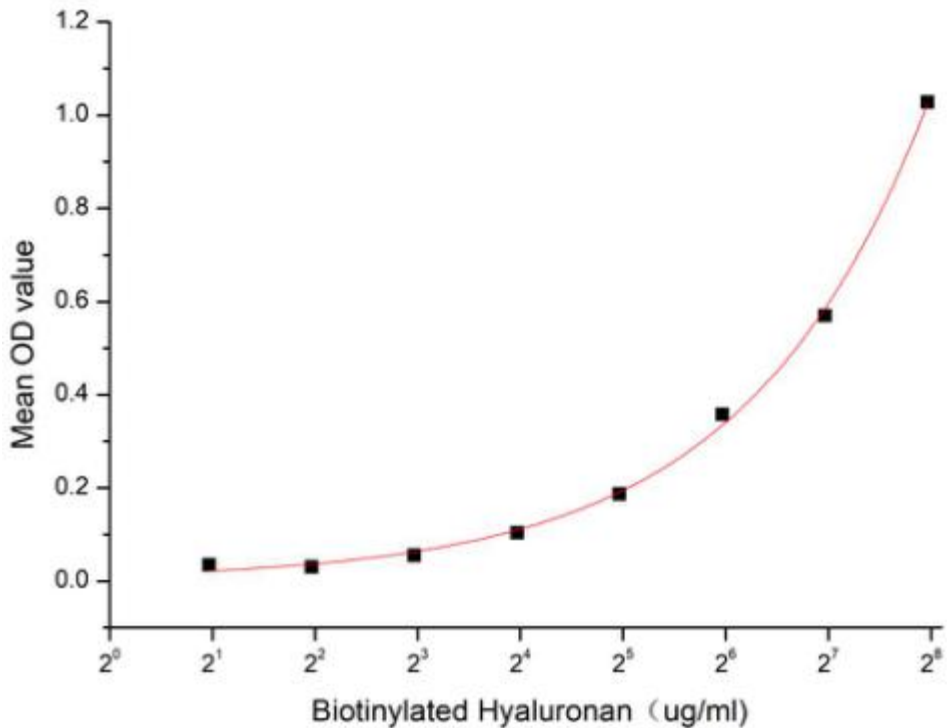


Figure 1. The binding activity of recombinant rat HCAM and biotinylated HA

## [ IDENTIFICATION ]

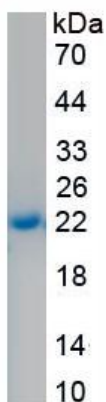


Figure 2. SDS-PAGE

Sample: Active recombinant HCAM, 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.