

APB670Hu01 100µg
Active Cluster Of Differentiation 146 (CD146)
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: Prokaryotic expression.

Host: *E. coli*

Residues: Asp324~Val565

Tags: N-terminal His-tag

Purity: >90%

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: 27.9kDa

Accurate Molecular Mass: 33kDa 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]

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DLDTMIS LLSEPEQLLV NYVSDVRVSP AAPERQEGSS LTLTCEAESS
QDLEFQWLRE ETGQVLERGP VLQLHDLKRE AGGGYRCVAS VPSIPGLNRT QLVNVAIFGP
PWMAFKERKV WVKENMVLNL SCEASGHPRP TISWNVNGTA SEQDQDPQRV LSTLNVLVTP
ELLETGVECT ASNDLGKNTS ILFLELVNLT TLTPDSNTTT GLSTSTASPH TRANSTSTER
KLPEPESRGV VIVAV
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[ACTIVITY]

CD146 (cluster of differentiation 146), also known as MUC18 or MCAM, is a putative adhesion molecule that belongs to the immunoglobulin superfamily (IgSF). It is an approximately 113-kDa type1 transmembrane glycoprotein that is expressed at the intercellular junction of endothelial cells. CD146 was originally identified as a tumor marker for melanoma (MCAM) due to its existence only in melanoma but not in the corresponding normal counterpart. However CD146 is not just a CAM for the inter-cellular and cell-matrix adhesion. Recent evidence indicates that CD146 is actively involved in miscellaneous processes, such as development, signaling transduction, cell migration, mesenchymal stem cells differentiation, angiogenesis and immune response. CD146 and PECAM-1 are both members of immunoglobulin superfamily of cell adhesion molecules. PECAM-1 has been identified as an interactor of CD146, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human CD146 and recombinant rat PECAM-1. Briefly, CD146 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to PECAM-1-coated microtiter wells and incubated for 1h at 37°C.

Wells were washed with PBST and incubated for 1h with anti-CD146 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37 °C , 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 ul stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant human CD146 and recombinant rat PECAM-1 was shown in Figure 1, the EC50 for this effect is 3.6 ug/mL.

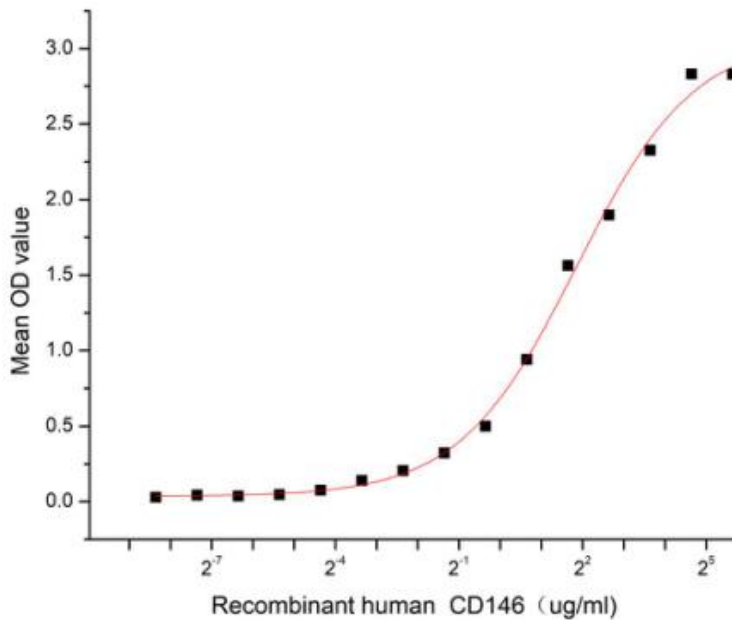


Figure 1. The binding activity of recombinant human CD146 and recombinant rat PECAM-1

[**IDENTIFICATION**]

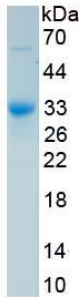


Figure 2. SDS-PAGE

Sample: Active recombinant CD146, 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.