

APA547Mu61 100µg
Active Vascular Cell Adhesion Molecule 1 (VCAM1)
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: Eukaryotic expression.

Host: 293F cell

Residues: Val110~Ser318

Tags: N-terminal His-tag

Purity: >90%

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: 4.5

Predicted Molecular Mass: 24.9kDa

Accurate Molecular Mass: 46kDa 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.

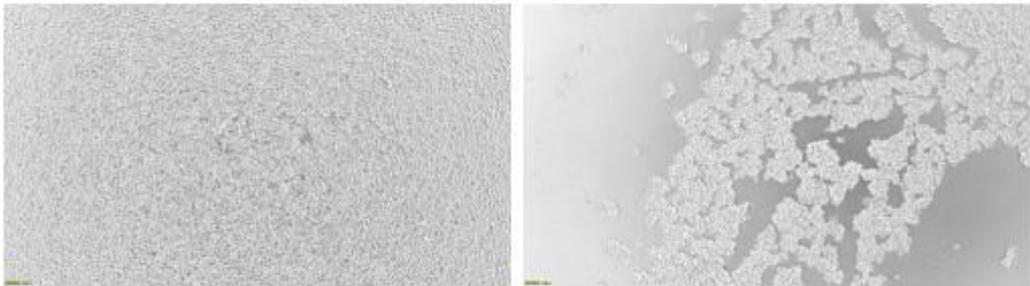
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SEGLPAPEIFWGRKLDNEVLQLLSGNATLTLIAMRMEDSGVYVCEGVNLIGRDKAEVELVVQEKPFIVD  
IS
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[ACTIVITY]

Vascular Cell Adhesion Molecule 1 (VCAM1) is a type I transmembrane glycoprotein belonging to the immunoglobulin superfamily of adhesion molecules. It is primarily expressed on the surface of endothelial cells, though its expression can be induced in other cell types such as smooth muscle cells, fibroblasts, and macrophages in response to pro-inflammatory cytokines like TNF- α , IL-1 β , and IFN- γ . As VCAM1 has the function of cell adhesion, we measure the activity of recombinant mouse VCAM1 by the ability of the immobilized protein to support the adhesion of U937 cells. When cells are added to different concentrations of recombinant mouse VCAM1 coated plates, cells will adhere after 2 hour incubation at 37 °C. The adhesion of U937 after 2 hour incubation at 37 °C observed by inverted microscope was shown in Figure 1. Cells adherent was in a dose dependent manner, the result was shown in Figure 2, the EC50 was 0.50 μ

g/ml.



A

B

Figure 1. The adhere effect of recombinant mouse VCAM1 on U937 cells

(A) U937 cells were seeded into the well coated with VCAM1 at 5 $\mu\text{g/ml}$ and incubated for 2 h at 37 $^{\circ}\text{C}$;

(B) U937 cells were seeded into the well without VCAM1 and incubated for 2 h at 37 $^{\circ}\text{C}$;

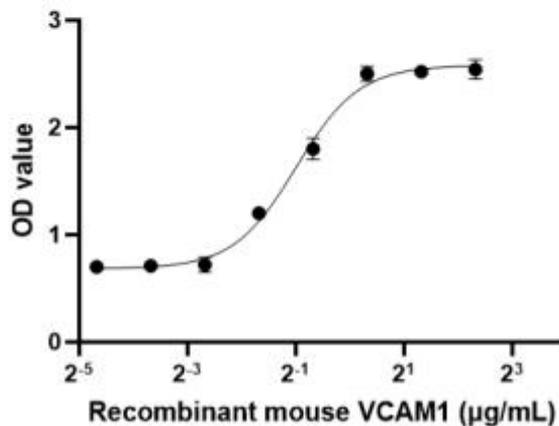


Figure 2. The dose-effect curve of recombinant mouse VCAM1 on U937 cells

[IDENTIFICATION]

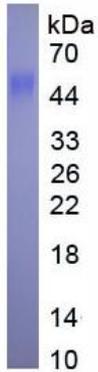


Figure 3. SDS-PAGE

Sample: Active recombinant VCAM1, 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.