APA363Ra61 100μg
Active Platelet/Endothelial Cell Adhesion Molecule (PECAM1)
Organism Species: *Rattus norvegicus (Rat)*
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: Gln18~Lys589
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: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 6.9
Predicted Molecular Mass: 66.2kDa
Accurate Molecular Mass: 120kDa 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]

QEN SFTINSIHME SRPSWEVSNG QKLTLQCLVD
ISTTSKSRPQ HQVLFYKDDA LVYNVSSSEH TESFVIPQSR VFHAGKYKCT
VILNSKEKTT IEYQLTVNGV PMPEVTVDKK EVTEGGIVTV NCSMQEEKPP
IYFKIEKVEL GTKNVKLSRE KTSNMNFVLI EFPIEEQDHL LVFRCQAGVL
SGIKMQTSEF IRSEYVTVQE FFSTPKFQIQ PPEMIIEGNQ LHIKCSVQVA
HLAQEFPEII IQKDKAIVAT SKQSKEAVYS VMALVEHSGH YTCKVESNRI
SKASSILVNI TELFPRPKLE LSSSRLDQGE MLDLSCSVSG APVANFTIQK
EETVLSQYQN FSKIAEERDS GLYSCTAGIG KVVKRSNLVP VQVCEMLSKP
RIFHDAKFEI IKGQIIGISC QSVNGTAPIT YRLLRAKSNF QTVQKNSNDP
VTFTDKPTRD MEYQCIVDNC HSHPEVRSEI LRVKVIAPVD EVTISILSGN
DVQSGDEMVL RCSVKEGTGP VTFQFYKEKE GRPFHEETVN DTQVFWHHEQ
TSKEQEGQYY CTAFNRASIV TSLRSGPLTV RVFLAPWKK

[ACTIVITY]

Platelet/Endothelial Cell Adhesion Molecule (PECAM1), also known as CD31, is a transmembrane glycoprotein expressed on endothelial cells, platelets, and leukocytes. It has six immunoglobulin - like domains.PECAM1 maintains vascular integrity via homophilic binding, regulating endothelial cell migration during angiogenesis. It also modulates immune responses by influencing leukocyte movement across the endothelium.Notably, its interaction with Integrin Beta 2

(CD18) promotes leukocyte - endothelial adhesion and transmigration, key for immune cell recruitment to inflammation sites.Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant rat PECAM1 and recombinant human CD18 . Briefly, biotin-linked PECAM1 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to CD18-coated microtiter wells and incubated for 1h at 37℃. 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℃. Finally, add 50μl stop solution to the wells and read at 450nm immediately. The binding activity of PECAM1 and CD18 was shown in Figure 1,and this effect was in a dose dependent manner.

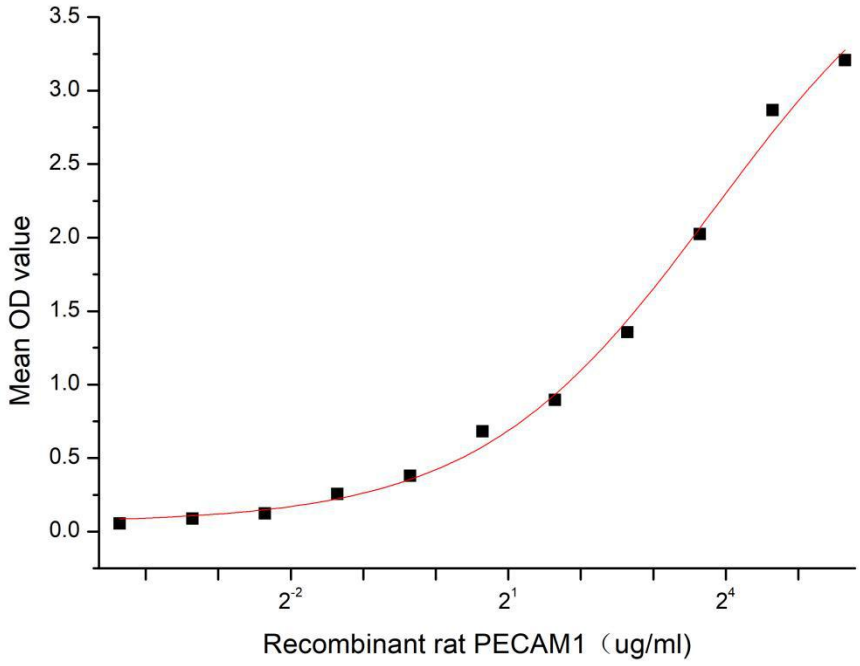

Figure 1. The binding activity of recombinant rat PECAM1 and recombinant human CD18

[IDENTIFICATION]

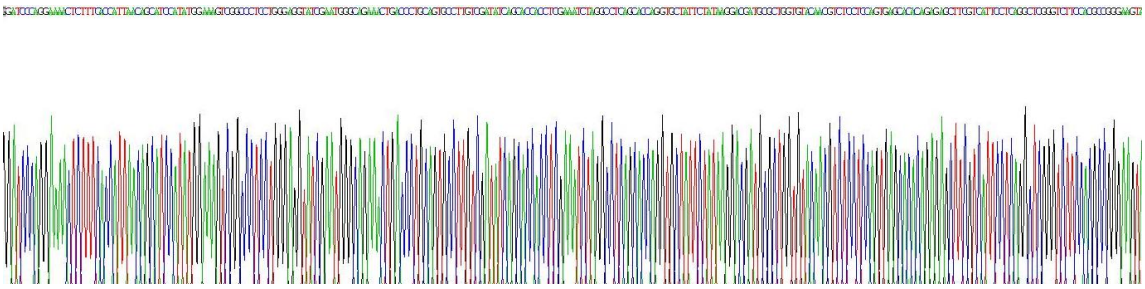

Figure 2. Gene Sequencing (extract)

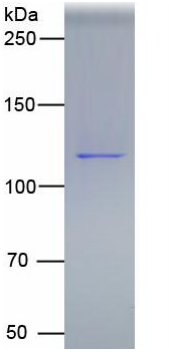

Figure 3. SDS-PAGE

Sample: Active recombinant PECAM1, 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.