APB851Hu01 100μg
Active Vascular Endothelial Growth Factor 121(VEGF121)
Organism Species: Homo sapiens (Human)
Instruction manual

FOR IN VITRO USE AND RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Pro28~Arg147
Tags: N-terminal His-tag
Purity: >98%
Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.
Applications: Cell culture; Activity Assays; In vivo assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 6.3
Predicted Molecular Mass: 18.2kDa
Accurate Molecular Mass: 17&18kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) 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.

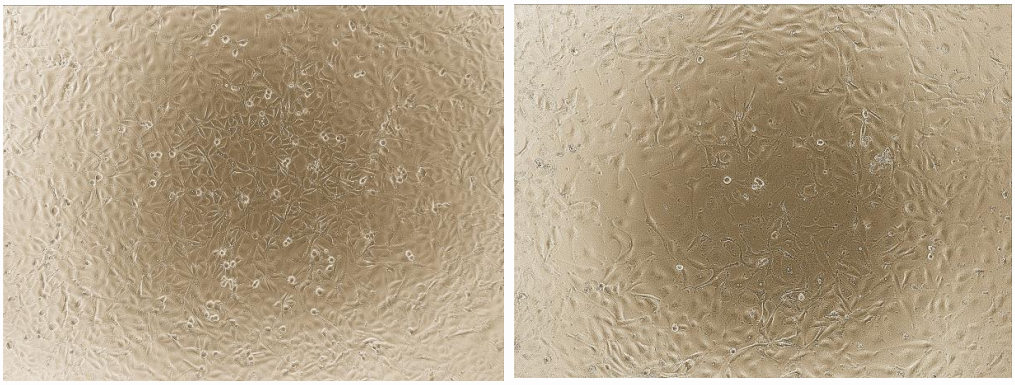
Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

PMA EGGGQNHHEV VKFMDVYQRS YCHPIETLVD IFQEYPDEIE YIFKPSCVPL MRCGGCCNDE GLECVPTEES NITMQIMRIK PHQGQHIGEM SFLQHNKCEC RPKKDRARQE KCDKPRR

[ACTIVITY]

VEGFA (Vascular endothelial growth factor A) is a growth factor and can be cleaved into several isoforms, including VEGF121. It induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis and induces permeabilization of blood vessels. It is accepted that the VEGF121 isoform stimulates the proliferation of vein endothelial cells. Thus, proliferation assay of recombinant human VEGF121 was conducted using ECV-304 cells. Briefly, ECV-304 cells were seeded into triplicate wells of 96-well plates at a density of 2,000 cells/well and allowed to attach overnight, then the medium was replaced with serum-free standard 1640 prior to the addition of various concentrations of VEGF121. After incubated for 48h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10μL of CCK-8 solution was added to each well of the plate, then the absorbance at 450nm was measured using a microplate reader after incubating the plate for 1-4 hours at 37°C. Proliferation of ECV-304 cells after incubation with VEGF121 for 48h observed by inverted microscope was shown in Figure 1. Cell viability was assessed by CCK-8 (Cell Counting Kit-8) assay after incubation with human recombinant VEGF121 for 48h. The result was shown in Figure 2. It was obvious that VEGF121 significantly increased cell viability of ECV-304 cells.



A B

Figure 1. Cell proliferation of ECV-304 cells after stimulated with VEGF121.

(A) ECV-304 cells cultured in 1640, stimulated with 100ng/mL VEGF121 for 48h;

(B) Unstimulated ECV-304 cells cultured in 1640 for 48h.

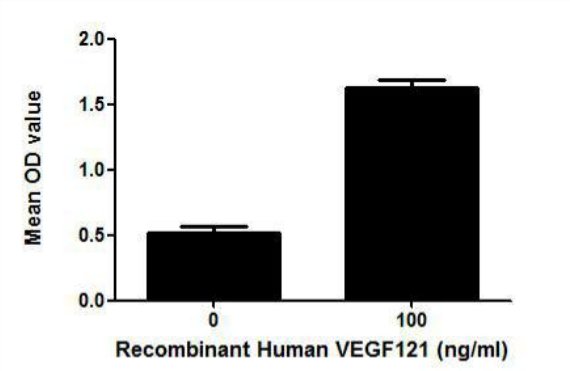


Figure 2. Cell proliferation of ECV-304 cells after stimulated with VEGF121.

[IDENTIFICATION]

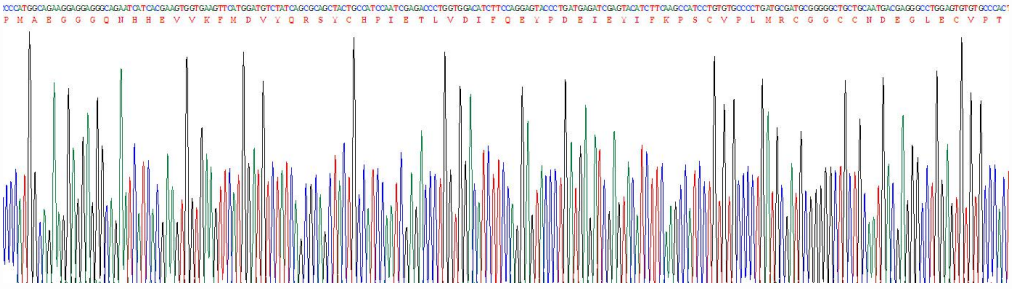


Figure 3. Gene Sequencing (extract)

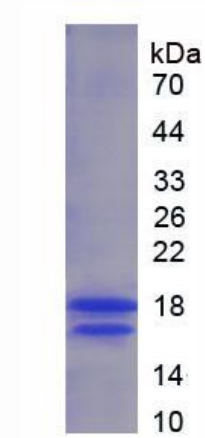


Figure 4. SDS-PAGE

Sample: Active recombinant VEGF121, Human

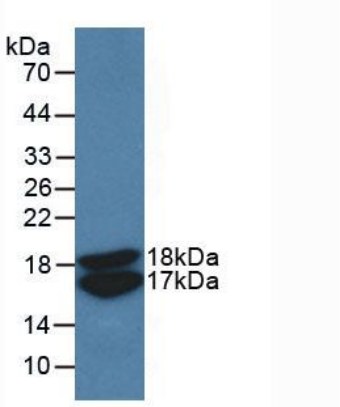


Figure 5. Western Blot

Sample: Recombinant VEGF121, Human;

Antibody: Rabbit Anti-Human VEGF121 Ab (PAB851Hu01)