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

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Pro28~Arg147
Tags: N-terminal His-tag
Purity: >95%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.
Original Concentration: 200μg/mL
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: 15.3kDa
Accurate Molecular Mass: 16kDa 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 -80ºC 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]

Vascular Endothelial Growth Factor 121 (VEGF121), a secreted glycoprotein member of the VEGF family and a VEGFA splice variant, lacks heparin-binding domains for free extracellular solubility. It binds VEGFR121 on vascular endothelial cells to exert robust pro-angiogenic effects, promoting endothelial cell proliferation, migration and tube formation to drive vasculogenesis and angiogenesis. Distinct from anti-proliferative/pro-apoptotic proteins, it inhibits endothelial cell apoptosis via survival signaling, sustaining vascular integrity and mediating tissue vascularization in development, wound repair and pathological angiogenesis.To test the effect of VEGF121 on cell apoptosis, HCT116 cells were seeded into triplicate wells of 96-well plates at a density of 5,000 cells/well and allowed to attach, replaced with serum-free overnight, then the medium was replaced with 5% serum standard DMEM prior to the addition of various concentrations of recombinant human VEGF121. After incubated for 48h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 µl of CCK-8 solution was added to each well of the plate, then the absorbance at 450 nm was measured using a microplate reader after incubating the plate for 1-4 hours at 37 ℃. Cell viability was assessed by CCK-8(Cell Counting Kit-8) assay after incubation with recombinant VEGF121 for 48h. The result was shown in Figure 1. It was obvious that VEGF121 significantly decreased cell viability of HCT116 cells. The ED50 of

recombinant human VEGF121 is 153 ng/mL.

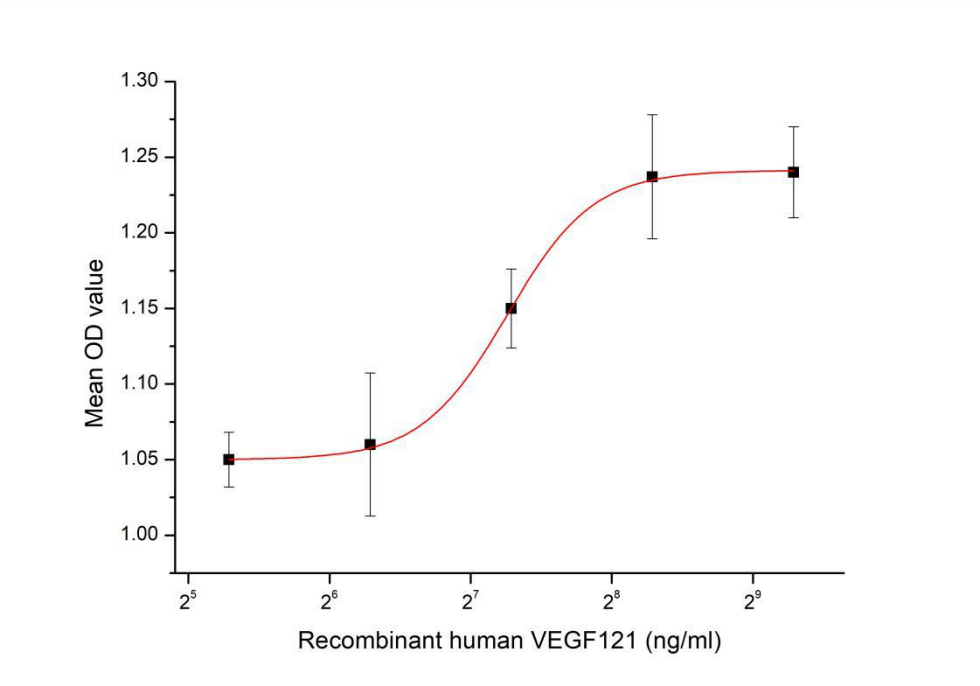

Figure 1. Cell apoptosis of HCT116 cells after stimulated with human VEGF121.

[IDENTIFICATION]

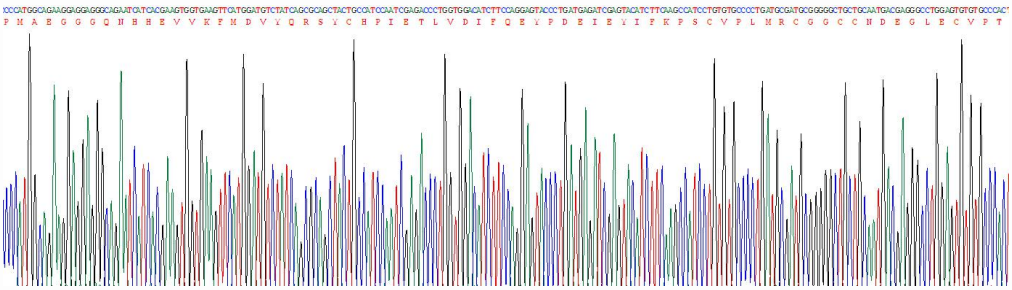

Figure 2. Gene Sequencing (extract)

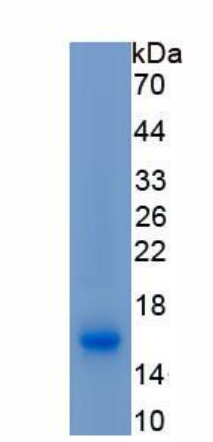

Figure 3. SDS-PAGE

Sample: Active recombinant VEGF121, 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.