Active Vascular Endothelial Growth Factor A (VEGFA)

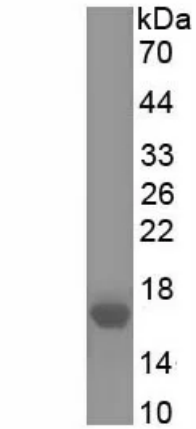
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概述（Summary）

别称（Alternative Names）	VEGF; VEGF-A; VPF; Vascular Endothelial Cell Growth Factor A; Vascular Permeability Factor
纯度（Purity）	Greater than 97% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Pro28-Arg147】
Accession #	P15692
表达宿主（Host）	-
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	18.2 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 20mM Tris, 150mM NaCl (PH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth. Induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis and induces permeabilization of blood vessels. Binds to the FLT1/VEGFR1 and KDR/VEGFR2 receptors, heparan sulfate and heparin. NRP1/Neuropilin-1 binds isoforms VEGF-165 and VEGF-145. Isoform VEGF165B binds to KDR but does not activate downstream signaling pathways, does not activate angiogenesis and inhibits tumor growth. Binding to NRP1 receptor initiates a signaling pathway needed for motor neuron axon guidance and cell body migration, including for

the caudal migration of facial motor neurons from rhombomere 4 to rhombomere 6 during embryonic development.

电泳图（SDS-PAGE image）



Greater than 97% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

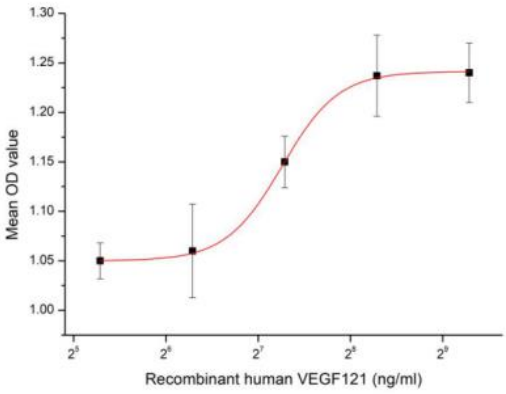


Figure 1. Cell apoptosis of HCT116 cells after stimulated with human VEGF121.

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.

注意事项（Note）

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