

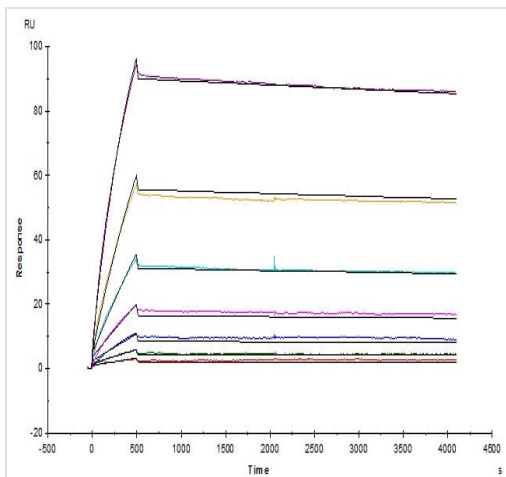
Recombinant human VEGFA protein (Active) ab155740

1 References 8 图像

描述	
产品名称	重组人VEGFA蛋白(Active)
生物活性	<p>The bio-activity was determined by dose-dependent stimulation of the proliferation of HUVEC cells.</p> <p>The ED₅₀ <5ng/ml, corresponding to a specific activity of >2x10⁵ Unit/mg.</p> <p>ab155740 at 2 µg/mL (100 µL/well) can bind Biotinylated Human VEGF R2, His Tag with a linear range of 10-156 ng/mL.</p>
纯度	<p>> 98 % SDS-PAGE.</p> <p>>95% as determined by SEC-MALS. Purified by ion exchnage chromatography.</p>
内毒素水平	< 1.000 Eu/µg
表达系统	HEK 293 cells
Accession	<u>NP_001165097</u>
蛋白长度	Full length protein
无动物成分	No
性质	Recombinant
种属	Human
序列	APMAEGGGQNHHEVVKFMDVYQRSYCHPIETLVDIFQEYPDE IEYIFKPS CVPLMRCGGCCNDEGLECVPTESNITMQIMRIKPHQGQHIG EMSFLQHN KCECRPKKDRARQENPCGPCSERRKHLFVQDPQTCKCCKNT DSRCKARQ LELNERTCRCDKPRR
预测分子量	19 kDa
氨基酸	27 to 191

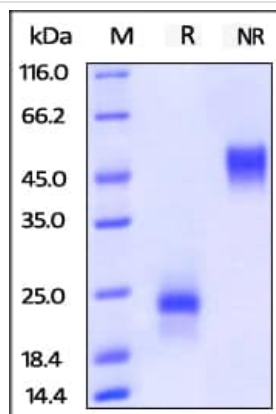
技术指标	
Our Abpromise guarantee covers the use of ab155740 in the following tested applications.	
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.	
应用	Functional Studies SDS-PAGE

形式	Lyophilized
制备和贮存	
稳定性和存储	<p>Shipped at 4°C. Store at -20°C or -80°C. Avoid freeze / thaw cycle.</p> <p>pH: 7.40</p> <p>Constituent: PBS</p> <p>Normally Mannitol or Trehalose are added as protectants before lyophilisation.</p> <p>This product is an active protein and may elicit a biological response in vivo, handle with caution.</p>
复溶	Reconstitute with sterile deionized water to a concentration of 200 µg/ml.
常规信息	
功能	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.
组织特异性	Isoform VEGF189, isoform VEGF165 and isoform VEGF121 are widely expressed. Isoform VEGF206 and isoform VEGF145 are not widely expressed.
疾病相关	Defects in VEGFA are a cause of susceptibility to microvascular complications of diabetes type 1 (MVCD1) [MIM:603933]. These are pathological conditions that develop in numerous tissues and organs as a consequence of diabetes mellitus. They include diabetic retinopathy, diabetic nephropathy leading to end-stage renal disease, and diabetic neuropathy. Diabetic retinopathy remains the major cause of new-onset blindness among diabetic adults. It is characterized by vascular permeability and increased tissue ischemia and angiogenesis.
序列相似性	Belongs to the PDGF/VEGF growth factor family.
细胞定位	Secreted. VEGF121 is acidic and freely secreted. VEGF165 is more basic, has heparin-binding properties and, although a significant proportion remains cell-associated, most is freely secreted. VEGF189 is very basic, it is cell-associated after secretion and is bound avidly by heparin and the extracellular matrix, although it may be released as a soluble form by heparin, heparinase or plasmin.
图片	



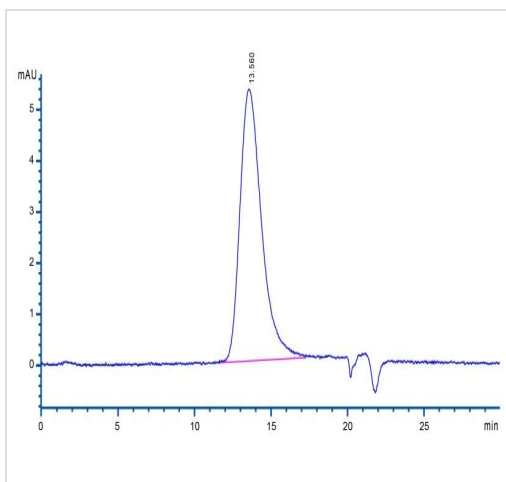
Functional Studies - Recombinant human VEGFA protein (ab155740)

Avastin (Bevacizumab) captured on CM5 chip via ant-human IgG Fc antibodies surface, can bind ab155740 with an affinity constant of 0.776 nM as determined in a SPR assay (Biacore T200).



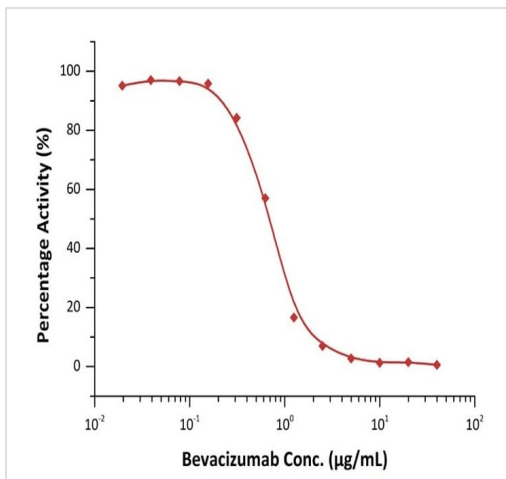
SDS-PAGE - Recombinant human VEGFA protein (ab155740)

ab155740 on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 98%.



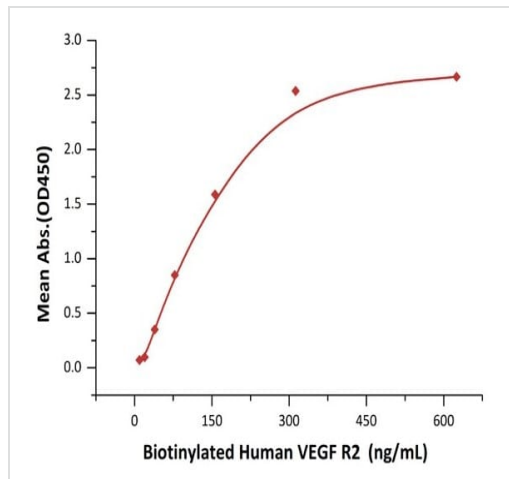
A SEC-HPLC analysis showing 95% of ab155740 present as active homodimers.

Functional Studies - Recombinant human VEGFA protein (ab155740)



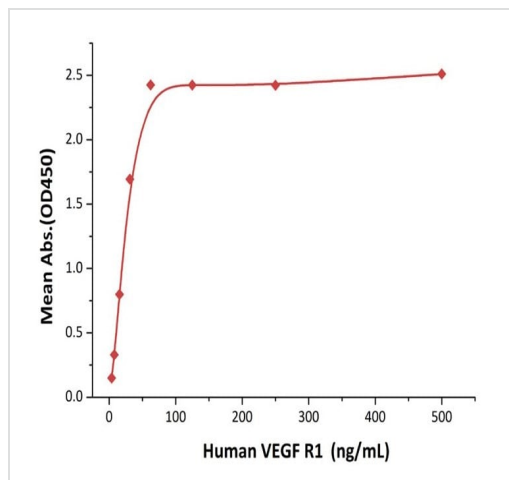
Immobilized ab155740 at 2 µg/mL (100 µL/well) can bind pre-mixed increasing concentrations of Bevacizumab and 0.5 µg/mL (100 µL/well) Biotinylated Human VEGF R2 protein with a half maximal inhibitory concentration (IC₅₀) of 0.70 µg/mL.

Functional Studies - Recombinant human VEGFA protein (Active) (ab155740)



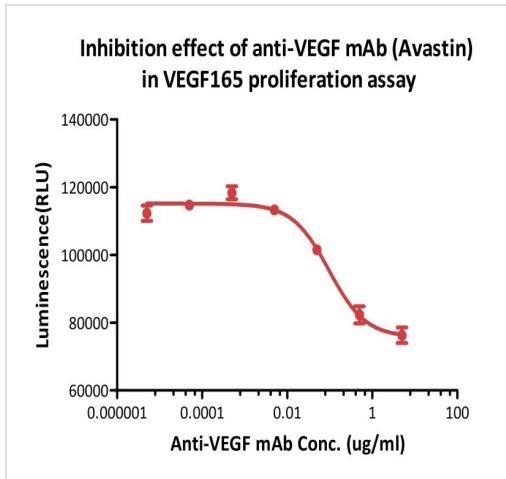
Immobilized ab155740 at 2 µg/mL (100 µL/well) can bind Biotinylated Human VEGF R2 protein with a linear range of 10-156 ng/mL.

Functional Studies - Recombinant human VEGFA protein (Active) (ab155740)



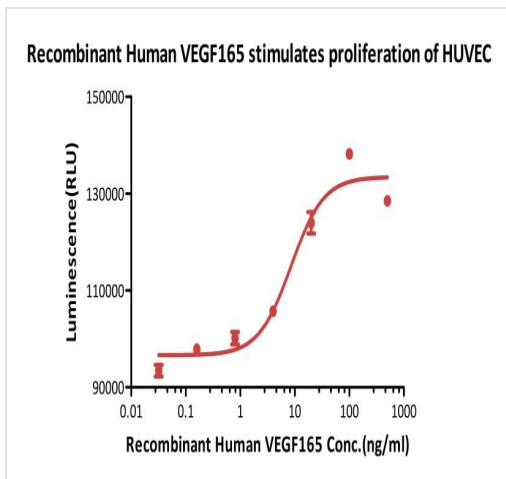
Immobilized ab155740 at 0.01 µg/mL (100 µL/well) can bind Human VEGF R1 protein with a linear range of 4-31 ng/mL.

Functional Studies - Recombinant human VEGFA protein (Active) (ab155740)



Inhibition assay shows that the proliferation effect of ab155740 is inhibited by increasing concentration of anti-VEGF mAb (Avastin). The concentration of VEGF165 used is 20 ng/ml. The ED₅₀ is 0.065-0.229 µg/mL.

Functional Studies - Recombinant human VEGFA protein (ab155740)



ab155740 stimulates proliferation of human umbilical vein endothelial cells (HUVEC). The ED₅₀ for this effect is 4.216-9.281 ng/ml.

Functional Studies - Recombinant human VEGFA protein (ab155740)

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