

Product datasheet

Anti-VEGFA antibody [16F1] ab155944

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Overview

Product name	Anti-VEGFA antibody [16F1]
Description	Mouse monoclonal [16F1] to VEGFA
Host species	Mouse
Tested applications	Suitable for: ICC, WB, Sandwich ELISA
Species reactivity	Reacts with: Human, Recombinant fragment
Immunogen	Recombinant full length Human VEGFA expressed in E-coli (P15692)
Positive control	WB: Human VEGFA recombinant protein; Human VEGFA transfected 293T cells. ICC: HeLa cells.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Storage buffer	Constituent: 100% PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	16F1
Isotype	IgG2a
Light chain type	kappa

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab155944 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC		1/20 - 1/100.
WB		Use a concentration of 1 µg/ml.
Sandwich ELISA		Use a concentration of 1 µg/ml. Typical dilutions for sandwich ELISA include 1µg/ml for coating and 0.125-0.5µg/ml for detection. Can be paired for Sandwich ELISA with Rabbit polyclonal to VEGFA (Biotin) (ab83132). To detect hVEGF by sandwich ELISA (using 100 µl/well antibody solution) a concentration of 0.5 - 2.0 µg/ml of this antibody as Detection is required. This antigen affinity purified antibody,

Target

Function

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.

Tissue specificity

Isoform VEGF189, isoform VEGF165 and isoform VEGF121 are widely expressed. Isoform VEGF206 and isoform VEGF145 are not widely expressed.

Involvement in disease

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.

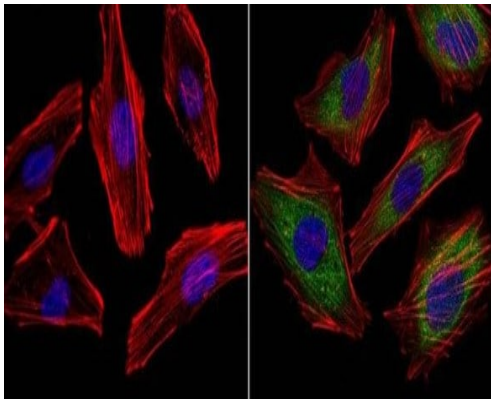
Sequence similarities

Belongs to the PDGF/VEGF growth factor family.

Cellular localization

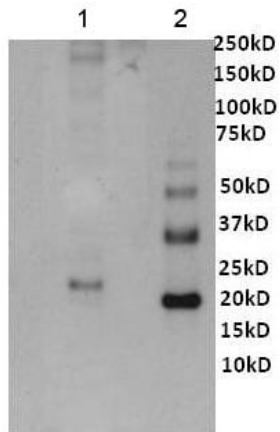
Secreted. VEGF121 is acidic and freely secreted. VEGF165 is more basic, has heparin-binding properties and, although a significant proportion remains cell-associated, most is freely secreted. VEGF189 is very basic, it is cell-associated after secretion and is bound avidly by heparin and the extracellular matrix, although it may be released as a soluble form by heparin, heparinase or plasmin.

Images



Immunocytochemistry - Anti-VEGFA antibody
[16F1] (ab155944)

Immunocytochemistry analysis of HeLa cells labelling VEGFA with ab155944 at 1/40 dilution. The cells were fixed with 4% paraformaldehyde, permeabilized with 0.1% Triton X-100 in PBS, and blocked with 3% Blocker BSA for 30 minutes at room temperature. No antibody control (left). A Dylight 488 goat anti-mouse IgG secondary antibody was used as a secondary antibody at 1/1000 dilution for 45 minutes at room temperature. F-actin (both panels, red) was stained by Dylight 554 Phalloidin and nuclei (both panels, blue) were stained with DAPI. Images were taken at 60X magnification.



Western blot - Anti-VEGFA antibody [16F1]
(ab155944)

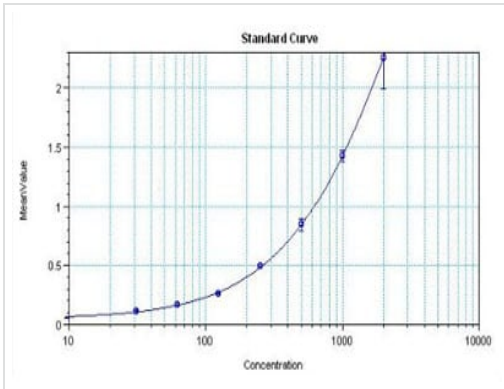
All lanes : Anti-VEGFA antibody [16F1] (ab155944) at 1 µg/ml

Lane 1 : VEGFA transfected 293T cell culture supernatant

Lane 2 : Recombinant VEGFA protein

Lysates/proteins at 0.5 µg per lane.

4-12% HCl



Sandwich ELISA - Anti-VEGFA antibody [16F1]
(ab155944)

The plate was coated with 100 μ L ab155944 at 1, 3, 4, 5 7 and 9 μ g/mL in DPBS for 12 - 18 hours at 4°C. After washing the plate was blocked with 300 μ L per well of 4% BSA / 5% sucrose in DPBS for 1 hour at room temperature.

Recombinant human VEGF protein (50 μ L /well) was added at 2000, 1000, 500, 250, 125, 62.5, 31.25, and 0 pg/mL for 2 hours at room temperature.

After washing the plate was incubated with ab155944 at 0.5 μ g /ML for 1 hour at room temperature.

Detection was with Streptavidin-HRP / TMB.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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