abcam

Product datasheet

Anti-VEGFA antibody [VG-1] ab1316

44 Abreviews 337 References 5 Images

Overview

Product name	Anti-VEGFA antibody [VG-1]
Description	Mouse monoclonal [VG-1] to VEGFA
Host species	Mouse
Specificity	Detects the 121, 165 and 189 VEGF isoforms in routinely fixed specimens. This antibody fails to detect endogenous natural samples in WB - we recommend **ab214424** as an alternative product.
Tested applications	**Suitable for:** IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human **Predicted to work with:** Rabbit, Dog **Does not react with:** Cow
Immunogen	corresponding to VEGFA.
Positive control	IHC-P: Human cerebellum and heart, Rat cerebellum, Mouse mammary fat pad and placenta.
General notes	This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact **orders@abcam.com**. 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. 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

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 6.97% L-Arginine

	Some batches contain 6.97% L-Arginine as a stabilizing agent. For lot-specific buffer information, please contact our Scientific Support team.
Purity	Protein G purified
Clonality	Monoclonal
Clone number	VG-1
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab1316 in the following tested applications.

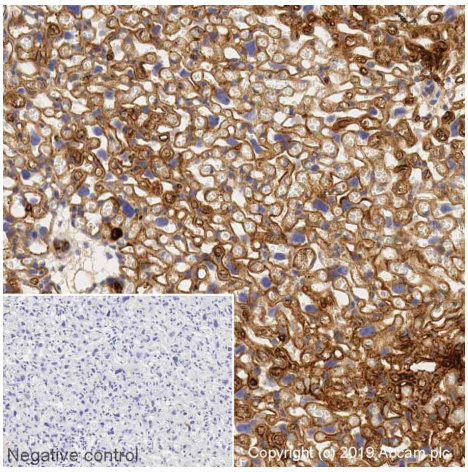
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P	★★★★☆ (17)	Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

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 signicant 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.

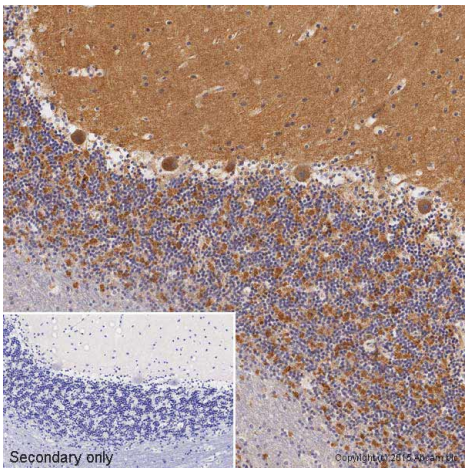
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-VEGFA antibody [VG-1] (ab1316)

IHC image of VEGFA staining in normal Mouse Placenta formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab1316, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-VEGFA antibody [VG-1] (ab1316)

IHC image of ab1316 staining VEGF in human cerebellum formalin fixed paraffin embedded tissue sections, performed on a Leica Bond. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab1316, 5µg/ml working concentration, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. No primary antibody was used in the secondary only control (shown on the inset).
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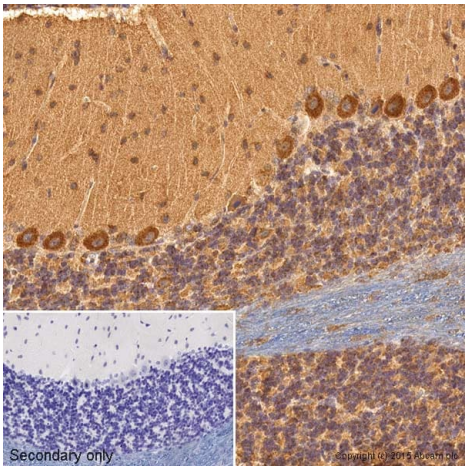

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-VEGFA antibody [VG-1] (ab1316)

IHC image of ab1316 staining VEGF in rat cerebellum formalin fixed paraffin embedded tissue sections, performed on a Leica Bond. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab1316, 5µg/ml working concentration, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. No primary antibody was used in the secondary only control (shown on the inset).
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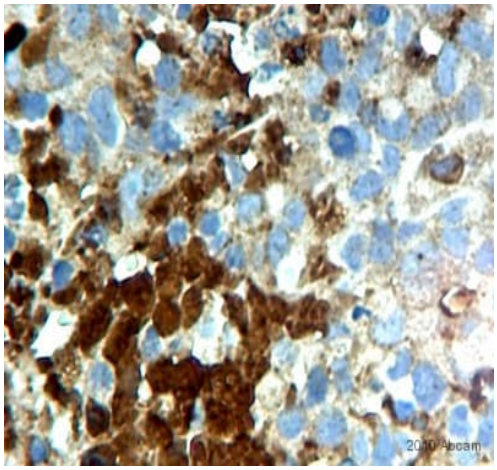
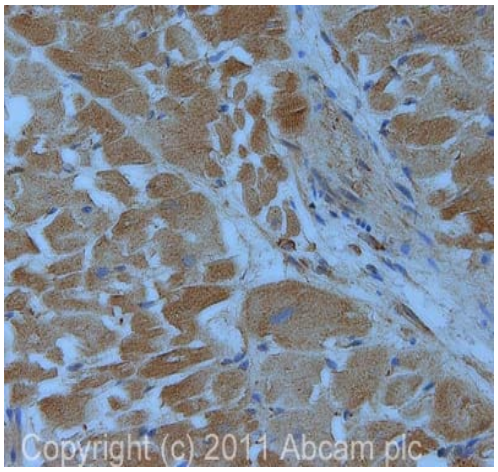


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-VEGFA antibody [VG-1] (ab1316)
This image is courtesy of an anonymous Abreview

ab1316 staining VEGF in Human MDA-MD-231 cells injected into the mouse mammary fat pad by Immunohistochemistry (IHC-P - formaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde, permeabilized with Tween in PBS and blocked with 1.5% serum for 1 hour at 25°C; antigen retrieval was by heat mediation in citrate buffer. Tissue samples were incubated with primary antibody (1/200 in PBST +1% BSA) for 16 hours at 4°C. A biotin-conjugated Goat anti-mouse IgG polyclonal (1/200) was used as the secondary antibody. Tissue was counterstained with Hematoxylin (1/10) for 30 seconds at room temperature and rinsed with water.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-VEGFA antibody [VG-1] (ab1316)

IHC image of ab1316 staining in human heart formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab1316, 5µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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