Product datasheet

Anti-VEGFA antibody ab46154

Overview

Product name: Anti-VEGFA antibody
Description: Rabbit polyclonal to VEGFA
Host species: Rabbit
Specificity: New batches of this antibody are no longer guaranteed in ICC/IF, IHC-P or IHC-Fr as they have not passed our stringent batch testing criteria. Please contact customer support for any specific queries. We recommend ab52917 as an alternative for ICC/IF and IHC-P.

Tested applications: Suitable for: WB, ELISA
Species reactivity: Reacts with: Mouse, Rat, Human
Immunogen: Synthetic peptide corresponding to Human VEGFA aa 50-150 conjugated to Keyhole Limpet Haemocyanin (KLH).
(Peptide available as ab46161)

Positive control: Purchase matching WB positive control: Recombinant Human VEGFA protein

ab46154 gave a positive result in the following whole cell lysates: Recombinant Human VEGFA protein Recombinant Mouse VEGFA protein HCT116 whole cell lysate

General notes: Abcam recommended secondaries - Goat Anti-Rabbit HRP (ab205718) and Goat Anti-Rabbit Alexa Fluor® 488 (ab150077).

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
Constituent: PBS
Note: Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

Purity: Immunogen affinity purified
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab46154 in the following tested applications.

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

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use a concentration of 1 µg/ml. Detects a band of approximately 23 kDa (predicted molecular weight: 27 kDa). We recommend Goat Anti-Rabbit IgG H&amp;L (HRP) (ab97051) secondary antibody.</td>
</tr>
<tr>
<td>ELISA</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
</tbody>
</table>

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
Anti-VEGFA antibody (ab46154) at 1 µg/ml + HCT116 whole cell lysate at 20 µg

Secondary
Rabbit IgG secondary antibody at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 27 kDa
Observed band size: 23 kDa

why is the actual band size different from the predicted?

Exposure time: 2 minutes

This blot was produced using a 10% Bis-tris gel under the MES buffer system. The gel was run at 200V for 35 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 5% Bovine Serum Albumin before being incubated with ab46154 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution.

Ab46154 was tested using indirect ELISA. The wells were coated with peptide (1 µg x mL⁻¹ at 100 µL per well) overnight at 4°C, followed by a 1% fat-free milk blocking step for 1 hour at room temperature. The primary antibody (ab46154) was added at a range of dilutions (50 µL per well) for 1 hour at room temperature. Ab97080 (Goat Anti-Rabbit IgG H&L-HRP) was used as a secondary antibody at 1:50,000 dilution for 1 hour at room temperature and signal was developed with TMB substrate.
All lanes: Anti-VEGFA antibody (ab46154) at 1 µg/ml

Lane 1: Recombinant Human VEGFA protein (ab204773)
Lane 2: Recombinant mouse VEGFA protein (Active) (ab185265)

Lysates/proteins at 0.1 µg per lane.

Secondary

All lanes: Rabbit IgG secondary antibody at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 27 kDa
Observed band size: 23 kDa

why is the actual band size different from the predicted?

Exposure time: 10 seconds

This blot was produced using a 10% Bis-tris gel under the MES buffer system. The gel was run at 200V for 35 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 3% Milk before being incubated with ab46154 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution.

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.
Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors