

## Product datasheet

# Anti-VEGFC antibody [mAbcam 63221] ab63221

1 References 3 Images

### Overview

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<b>Product name</b>	Anti-VEGFC antibody [mAbcam 63221]
<b>Description</b>	Mouse monoclonal [mAbcam 63221] to VEGFC
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> WB, Flow Cyt
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	This antibody gave a positive signal in the following human lysates: Spleen tissue; Lymph Node tissue; Thymus tissue; HepG2 whole cell; HEK293 whole cell. This antibody also detects a band of the expected molecular weight when tested against recombinant VEGFC protein ( <a href="#">ab83573</a> ).
<b>General notes</b>	<p>This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact <a href="mailto:orders@abcam.com">orders@abcam.com</a>.</p> <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&amp;As</p>

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term.
<b>Storage buffer</b>	pH: 7.40 Constituent: 1% BSA
<b>Purity</b>	Protein G purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	mAbcam 63221
<b>Myeloma</b>	Sp2/0-Ag14

Isotype

IgG2b

## Applications

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### The Abpromise guarantee

Our [Abpromise guarantee](#) covers the use of ab63221 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
WB		Use a concentration of 10 µg/ml. Detects a band of approximately 47 kDa (predicted molecular weight: 47 kDa).
Flow Cyt		Use 1µg for 10 <sup>6</sup> cells. <a href="#">ab170192</a> - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

## Target

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### Function

Growth factor active in angiogenesis, and endothelial cell growth, stimulating their proliferation and migration and also has effects on the permeability of blood vessels. May function in angiogenesis of the venous and lymphatic vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults. Binds and activates VEGFR-2 (KDR/FLK1) and VEGFR-3 (FLT4) receptors.

### Tissue specificity

Spleen, lymph node, thymus, appendix, bone marrow, heart, placenta, ovary, skeletal muscle, prostate, testis, colon and small intestine and fetal liver, lung and kidney, but not in peripheral blood lymphocyte.

### Sequence similarities

Belongs to the PDGF/VEGF growth factor family.

### Post-translational modifications

Undergoes a complex proteolytic maturation which generates a variety of processed secreted forms with increased activity toward VEGFR-3, but only the fully processed form could activate VEGFR-2. VEGF-C first form an antiparallel homodimer linked by disulfide bonds. Before secretion, a cleavage occurs between Arg-227 and Ser-228 producing an heterotetramer. The next extracellular step of the processing removes the N-terminal propeptide. Finally the mature VEGF-C is composed mostly of two VEGF homology domains (VHDs) bound by non-covalent interactions.

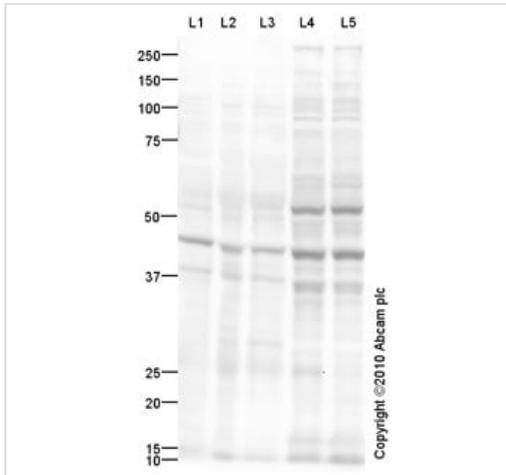
### Cellular localization

Secreted.

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## Images

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Western blot - Anti-VEGFC antibody [mAbcam 63221] (ab63221)

**All lanes :** Anti-VEGFC antibody [mAbcam 63221] (ab63221) at 10 µg/ml

**Lane 1 :** Human spleen tissue lysate - total protein ([ab29699](#))

**Lane 2 :** Human lymph node tissue lysate - total protein ([ab29871](#))

**Lane 3 :** Human thymus tissue lysate - total protein ([ab30146](#))

**Lane 4 :** HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate

**Lane 5 :** HEK293 (Human embryonic kidney cell line) Whole Cell Lysate

Lysates/proteins at 20 µg per lane.

#### Secondary

**All lanes :** Goat polyclonal to Mouse IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 47 kDa

**Observed band size:** 47 kDa

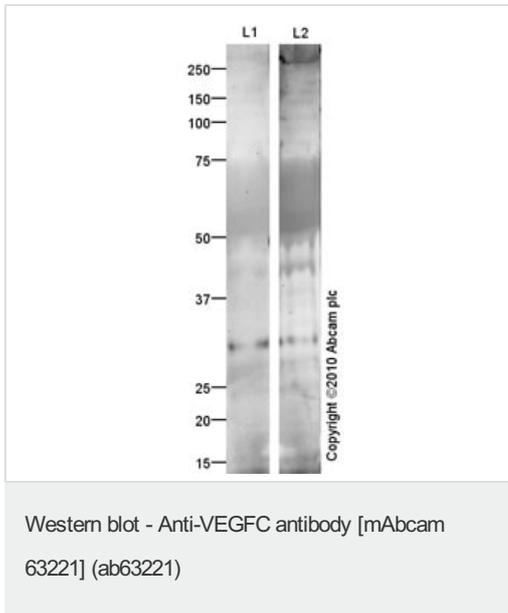
**Additional bands at:** 38 kDa, 55 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 1 minute

In human spleen, lymph node and thymus tissue lysates, this antibody detects a band close to 47-kDa, corresponding to the predicted MW of VEGF-C. In cell lysates, the antibody detects the same 47-kDa, as well as additional bands around 50-kDa and 37-kDa. The target protein can be glycosylated and the sequence contains both a 31 residue signal sequence and two pro-peptides (residues 32-111 and 228-419). VEGF-C undergoes a complex proteolytic maturation which generates a variety of

processed secreted forms.

Further characterization on this product is underway. Abcam welcomes customer feedback and would appreciate any comments regarding this product and the data presented above.



**Lane 1** : Anti-VEGFC antibody [mAbcam 63221] (ab63221) at 1  $\mu\text{g/ml}$

**Lane 2** : Anti-VEGFC antibody [mAbcam 63221] (ab63221) at 10  $\mu\text{g/ml}$

**All lanes** : Recombinant Human VEGFC protein ([ab83573](#))

Lysates/proteins at 0.1  $\mu\text{g}$  per lane.

### Secondary

**All lanes** : Goat polyclonal to Mouse IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

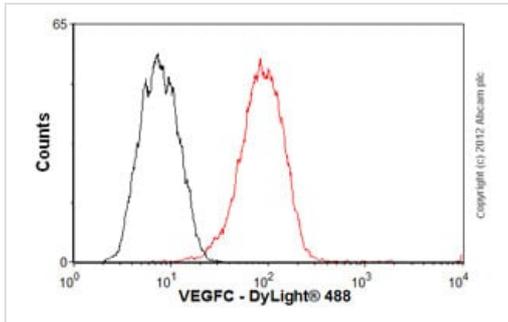
**Predicted band size:** 47 kDa

**Observed band size:** 47 kDa

**Additional bands at:** 38 kDa, 55 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 20 minutes

Individual chains of [ab83573](#) migrate as a band between 27 and 35 kDa in SDS-PAGE due to post-translational modifications, in particular glycosylation.



Flow Cytometry - Anti-VEGFC antibody [mAbcam 63221] (ab63221)

Overlay histogram showing HepG2 cells stained with ab63221 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab63221, 1 µg/1x10<sup>6</sup> cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2b [PLPV219] (ab91366, 2 µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HepG2 cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

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

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