



### Anti-human VEGF-A (#339/H2)

20140210BB



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

<b>Cat.-no.:</b>	<b>101-M60</b>
Size:	100 µg
Lot. No.:	According to product label
Country of origin:	Germany

**Preparation:** Monoclonals were produced with the help of BALB/c mice using recombinant human VEGF189 derived from E. coli.

### Target Background

<b>Synonyms:</b>	Vascular endothelial growth factor-A, VPF
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Human Vascular Endothelial Growth Factor VEGF<sub>165</sub>, a 23kDa protein consisting of 165 amino acid residues, is produced as a homodimer. VEGF is a polypeptide growth factor and a member of the platelet-derived growth factor family. It is a specific mitogen for vascular endothelial cells and a strong angiogenic factor in vivo. Two high-affinity tyrosine kinase receptors for VEGF<sub>165</sub> have been identified, VEGFR-1 (FLT-1), and VEGFR-2 (KDR). In addition to its action as a mitogen it is a potent vascular permeability factor (VPF) in vivo. VEGF<sub>165</sub> is also a chemo attractant molecule for monocytes and endothelial cells. 5 different proteins are generated by differential splicing: VEGF<sub>121</sub>, VEGF<sub>145</sub>, VEGF<sub>165</sub>, VEGF<sub>189</sub> and VEGF<sub>206</sub>. The most abundant form is VEGF<sub>165</sub>. Whereas VEGF<sub>121</sub> and VEGF<sub>165</sub> are secreted proteins, VEGF<sub>145</sub>, VEGF<sub>189</sub> and VEGF<sub>206</sub> are strongly cell-associated. The isoforms VEGF<sub>145</sub>, VEGF<sub>165</sub> and VEGF<sub>189</sub> bind to heparin with high affinity. VEGF<sub>165</sub> is apparently a homo-dimer, but preparations of VEGF<sub>165</sub> show some heterogeneity on SDS gels, depending on the secretion of different glycosylation patterns. All dimeric forms have similar biological activities but their bioavailability is very different. There is good evidence that different cells and tissues express different VEGF isoforms. The other members of this increasing growth factor family are VEGF-B, -C, -D and -E. Another member is the Placenta growth factor PlGF.

### References

1. Breier et al., Dev 114:521, 1992
2. Fiebig et al., Eur J Biochem 211:19, 1993
3. Flamme et al., Dev Biol 162:699, 1995
4. Kremer et al., Cancer Res 57:3852, 1997

### Database References Antigen

<b>Protein RefSeq:</b>	NP_001165095
<b>Uniprot ID:</b>	P15692-2
<b>mRNA RefSeq:</b>	NM_001171624

### Product Specifications

<b>Species reactivity</b>	human
<b>Clone/Ab feature</b>	IgG <sub>1</sub> ; #339/H2
<b>Cross reactivity</b>	ND
<b>Host</b>	mouse
<b>Clonality</b>	monoclonal
<b>Purification</b>	Protein G purified
<b>Immunogen</b>	recombinant human VEGF <sub>189</sub> (RT# 300-094)
<b>Formulation</b>	lyophilized
<b>Buffer</b>	PBS

**Stability:** The lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.

**Reconstitution:** Centrifuge vial prior to opening. Reconstitute in sterile water to a concentration of 0.1-1.0 mg/ml.

**AVOID REPEATED FREEZE AND THAW CYCLES!**

### Applications

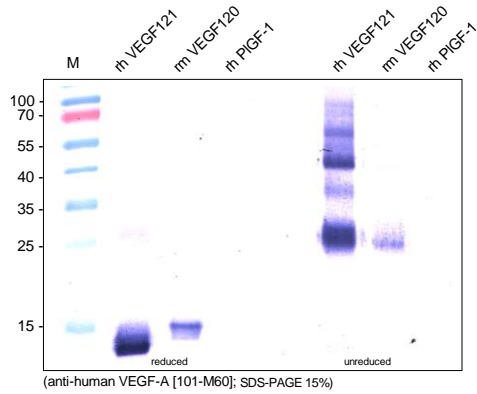
**ELISA:** Use at 1-5 µg/ml  
**Western Blot:** Use at 1-5µg/ml

**NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!**

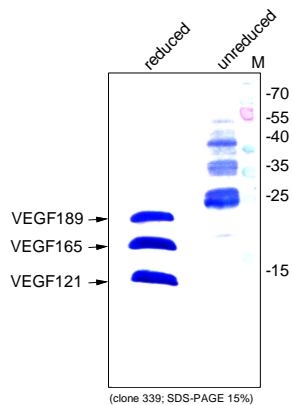


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### Handling/Applications



**Figure 1:** Western analysis of recombinant human and mouse VEGF-A and PlGF-1 using a monoclonal antibody directed against human VEGF<sub>189</sub> produced in *E. coli*. The antibody recognizes the unreduced and reduced protein. There is a weak cross reactivity with mouse VEGF-A visible.



**Figure 2: Western blot analysis** of human VEGF-A isoforms 121, 165 and 189 (all produced in *E. coli*) under reducing (left panel) and non-reducing conditions (right panel).