



Anti-human VEGF-A (#3C5)

20140210BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	101-M56
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 VEGF165 derived from insect cells as the immunizing antigen.

Target Background

Synonyms:	Vascular endothelial growth factor-A, VPF
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Human Vascular Endothelial Growth Factor VEGF₁₆₅, 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 VEGF₁₆₅ 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. VEGF₁₆₅ is also a chemo attractant molecule for monocytes and endothelial cells. 5 different proteins are generated by differential splicing: VEGF₁₂₁, VEGF₁₄₅, VEGF₁₆₅, VEGF₁₈₉ and VEGF₂₀₆. The most abundant form is VEGF₁₆₅. Whereas VEGF₁₂₁ and VEGF₁₆₅ are secreted proteins, VEGF₁₄₅, VEGF₁₈₉ and VEGF₂₀₆ are strongly cell-associated. The isoforms VEGF₁₄₅, VEGF₁₆₅ and VEGF₁₈₉ bind to heparin with high affinity. VEGF₁₆₅ is apparently a homo-dimer, but preparations of VEGF₁₆₅ 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

Protein RefSeq:	NP_001165097
Uniprot ID:	P15692-4
mRNA RefSeq:	NM_001171626

Product Specifications

Species reactivity	human
Clone/Ab feature	IgG ₁ ; #3C5
Cross reactivity	ND
Host	mouse
Clonality	monoclonal
Purification	Protein G purified
Immunogen	recombinant human VEGF ₁₆₅ (RT# 300-036)
Formulation	lyophilized
Buffer	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

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

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



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Handling/Applications

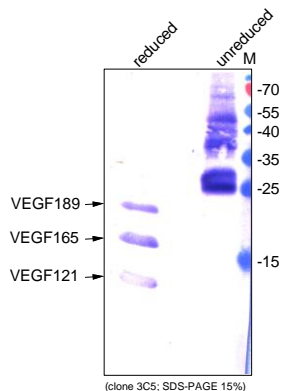


Figure 1: Western blot analysis of human VEGF-A isoforms 121, 165 and 189 (all produced in *E. coli*) under reducing (left panel) and non-reducing conditions (right panel).

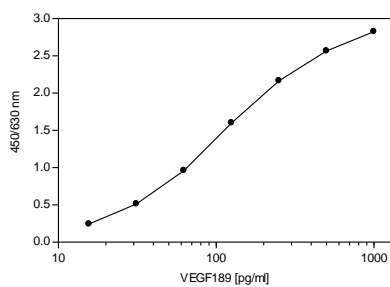


Figure 2. VEGF-A Sandwich-ELISA using VEGF₁₈₉ (Cat# 300-094) as standard. Mouse anti-human VEGF-A (Cat# 101-M56) was used as capture antibody, Biotinylated mouse anti-human VEGF-A #339 (Cat# 101-MBi60) was used for detection.