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

20140207BB

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	**101-MBi60**
Size:	50 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

Synonyms:	Vascular endothelial growth factor-A, VPF

Human Vascular Endothelial Growth Factor $VEGF_{165}$, 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 $VEGF_{165}$ 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. $VEGF_{165}$ is also a chemo attractant molecule for monocytes and endothelial cells. 5 different proteins are generated by differential splicing: $VEGF_{121}$, $VEGF_{145}$, $VEGF_{165}$, $VEGF_{189}$ and $VEGF_{206}$. The most abundant form is $VEGF_{165}$. Whereas $VEGF_{121}$ and $VEGF_{165}$ are secreted proteins, $VEGF_{145}$, $VEGF_{189}$ and $VEGF_{206}$ are strongly cell-associated. The isoforms $VEGF_{145}$, $VEGF_{165}$ and $VEGF_{189}$ bind to heparin with high affinity. $VEGF_{165}$ is apparently a homo-dimer, but preparations of $VEGF_{165}$ 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 at al., Cancer Res 57:3852, 1997

Database References Antigen

Protein RefSeq:	NP_001165095
Uniprot ID:	P15692-2
mRNA RefSeq:	NM_001171624

Product Specifications

Species reactivity	human
Clone/Ab feature	#339/H2; IgG_1
Cross reactivity	ND
Host	mouse
Clonality	monoclonal
Purification	Protein G purified
Immunogen	recombinant human $VEGF_{189}$ (RT# 300-094)
Formulation	lyophilized
Buffer/Stabilizer	PBS; 50X BSA
Preservative	0,02% sodium azide
Conjugation	Biotin

Warnings: Reagents contain sodium azide. Under acidic conditions sodium azide yields hydrazoic acid, this is extremely toxic. Azide compounds should be diluted with running water before discarding. These precautions are recommended to avoid deposits in plumbing where explosive condition may develop.

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

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

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Handling/Applications

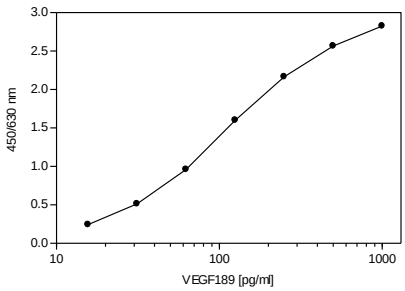

Figure 1: VEGF-A Sandwich-ELISA using $VEGF_{189}$ (Cat# 300-094) as standard. Mouse anti-human VEGF-A #3C5 (Cat# 101-M56) was used as capture antibody, Biotinylated mouse anti-human VEGF-A #339/H2 (Cat# 101-MBi60) was used for detection.