



## Anti-Human VEGF-A

20150223ML



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

<b>Cat.-no.:</b>	<b>102-P91G</b>
Size:	100 µg
Lot. No.:	According to product label

**Preparation:** Produced from sera of goats pre-immunized with highly pure (>98%) recombinant hVEGF. Anti-hVEGF specific antibody was purified by affinity chromatography employing immobilized hVEGF matrix.

### Target Background

<b>Synonyms (Target):</b>	VEGFA; VPF; VEGF; MVCD1
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Vascular endothelial growth factor (VEGF or VEGF-A), also known as vascular permeability factor (VPF) or vasculotropin, is a homodimeric 34 - 42 kDa, heparin-binding glycoprotein with potent angiogenic, mitogenic and vascular permeability-enhancing activities specific for endothelial cells. Different isoforms can be generated by differential splicing (e.g. VEGF165). All eight cysteine residues involved in intra- and inter-chain disulfide bonds are conserved among these growth factors. A cDNA encoding a protein having a 53% amino acid sequence homology in the PDGF-like region of VEGF has been isolated from a human placental cDNA library. This protein, named placenta growth factor (PlGF), is now recognized to be a member of the VEGF family of growth factors. Two receptor tyrosine kinases have been described as putative VEGF receptors. Flt-1 (fms-like tyrosine kinase), and KDR (kinase-insert-domain-containing receptor) proteins have been shown to bind VEGF-A with high affinity. In vitro, VEGF is a potent endothelial cell mitogen. In cultured endothelial cells, VEGF can activate phospholipase C and induce rapid increases of free cytosolic Ca<sup>2+</sup>. VEGF has also been shown to be chemotactic for monocytes and osteoblasts. In vivo, VEGF can induce angiogenesis as well as increase microvascular permeability. As a vascular permeability factor, VEGF acts directly on the endothelium and does not degranulate mast cells. Based on its in vitro and in vivo properties, VEGF is expected to play important roles in inflammation and during normal and pathological angiogenesis, a process that is associated with wound healing, embryonic development, and growth and metastasis of solid tumors.

### Database References Target

<b>Protein RefSeq:</b>	NP_001165097
<b>Uniprot ID:</b>	P15692
<b>mRNA RefSeq:</b>	NM_001171626

### Product Specifications

<b>Species reactivity</b>	Human
<b>Clone/Ab feature</b>	Goat IgG
<b>Cross reactivity</b>	Human
<b>Host</b>	Goat
<b>Clonality</b>	Polyclonal Antibody
<b>Purification</b>	Antigen-affinity purified
<b>Immunogen</b>	Recombinant Human VEGF165
<b>Formulation</b>	lyophilized from PBS
<b>Reconstitution buffer</b>	water

**Reconstitution:** Reconstitute the antibody in sterile water to a concentration of 0.1 - 1.0 mg/ml.

**Stability:** The lyophilized antibody is stable for at least 2 years from date of receipt at -20°C. 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.



**AVOID REPEATED FREEZE AND THAW CYCLES!**

### Applications

**Neutralization:** To yield one-half maximal inhibition [ND<sub>50</sub>] of the biological activity of hVEGF (10 ng/ml), a concentration of 0.05 - 0.1 µg/ml of this antibody is required.

**ELISA:** To detect human VEGF-A by sandwich ELISA (using 100 µl/well antibody solution) a concentration of 0.5 - 2.0 µg/ml of this antibody is required. This antigen affinity purified antibody, in conjunction with compatible secondary reagents, allows the detection of at least 0.2 - 0.4 ng/well of recombinant human SCGF-β.

**Western Blot:** To detect human VEGF-A by Western Blot analysis this antibody can be used at a concentration of 0.1-0.2 µg/ml. Used in conjunction with compatible secondary reagents the detection limit for recombinant human VEGF-A is 1.5-3.0 ng/lane, under either reducing or non-reducing conditions.

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