Anti-Human VEGF-A

20151104BB

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	**102-P91**
Size:	100 µg
Lot. No.:	According to product label

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

Target Background

Synonyms (Target):	VEGFA; VPF; VEGF; MVCD1

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 Ca2+. 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

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

Product Specifications

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

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

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.

AVOID REPEATED FREEZE AND THAW CYCLES!

Applications

Neutralization: To yield one-half maximal inhibition [ND_{50}] of the biological activity of human VEGF-A (10ng/ml) a concentration of 0.05 - 0.1 µg/ml of this antibody is required.

Sandwich ELISA: To detect human VEGF-A by sandwich ELISA (using 100µl/well) 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 hVEGF-A.

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. When used in conjunction with compatible secondary reagents the detection limit for recombinant hVEGF-A is 1.5 - 3.0 ng/lane, under either reducing or non-reducing conditions.

Immunohistochemistry: This antibody stained formalin-fixed, paraffin-embedded sections of human breast invasive ductal carcinoma. The recommended concentrations are 2.5 – 5.5 µg/ml with an overnight incubation at 4°C. An HRP-labeled polymer detection system was used with a DAB chromogen. Heat induced antigen retrieval with a pH 6.0 sodium citrate buffer is recommended.

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