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Product datasheet for TA336487

VEGFA Mouse Monoclonal Antibody [Clone ID: VG1]

Product data:

Product Type:	Primary Antibodies
Clone Name:	VG1
Applications:	CyTOF-ready, ELISA, FC, ICC/IF, IHC, Simple Western, WB
Recommended Dilution:	Flow Cytometry, Western Blot: 1-2 ug/ml, Immunocytochemistry/ Immunofluorescence: 1:10-1:500, Immunohistochemistry: 1:20-1:100, Immunohistochemistry-Frozen: 1:20-1:100, Immunohistochemistry-Paraffin: 1:20-1:100, CyTOF-ready, ELISA, Simple Western
Reactivity:	Human, Mouse, Rat, Canine
Host:	Mouse
Isotype:	IgG1, kappa
Clonality:	Monoclonal
Immunogen:	Recombinant VEGF 189 protein.
Formulation:	PBS containing 0.05% BSA, 0.05% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Protein G purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	vascular endothelial growth factor A
Database Link:	NP_001028928 Entrez Gene 22339 MouseEntrez Gene 83785 RatEntrez Gene 7422 Human P15692

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Background: VEGF (vascular endothelial growth factor) is a homodimeric, disulfide-linked glycoprotein growth factor that plays a critical role in angiogenesis, vasculogenesis and endothelial cell growth through induction of endothelial cell proliferation and blood vessels permeabilization, cell migration promotion as well as inhibition of apoptosis. VEGF can bind to FLT1/VEGFR1 and KDR/VEGFR2 receptors, heparan sulfate and heparin. Its isoforms VEGF189, VEGF165 and VEGF121 are widely expressed, whereas, other isoforms VEGF206 and VEGF145 are not very common. The basic isoform VEGF189 is cell-associated after secretion and is bound avidly by heparin and the extracellular matrix, although it may be released as a soluble form by heparin, heparinase or plasmin. VEGF bind to three tyrosine-kinase receptors, VEGFR-1, VEGFR-2 and VEGFR-3 which are expressed almost exclusively in endothelial cells. VEGFR-2 is the main angiogenic signal transducer for VEGF, while VEGFR-3 is specific for VEGF-C/-D (may gain VEGFR-2 binding ability via proteolytic processing) and is essential for lymphangiogenic signaling. VEGF is regulated by growth factors, cytokines, gonadotropins, nitric oxide, hypoxia, hypoglycemia and oncogenic mutations. Defects in VEGFA are linked to MVCD1 (microvascular complications of diabetes type 1) and VEGF polymorphisms are associated with susceptibility to multiple cancers, e.g., glioma, HCC, ovarian, bladder, prostate, breast cancer etc.

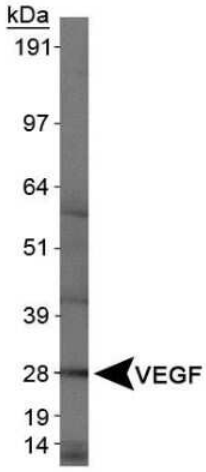
Synonyms: MVCD1; VEGF; VPF

Note: This VEGF antibody is useful for Immunohistochemistry (frozen and paraffin-embedded sections), Western blot and Immunocytochemistry/Immunofluorescence. ELISA was reported in scientific literature. In IHC a dilution of 1:20-1:50 was used in an ABC method. However, depending on the staining conditions employed, we suggest that the final dilution should be determined by the user. We suggest an incubation period of 30-60 minutes at room temperature. High temperature treatment of formalin-fixed tissue sections using 1mM EDTA, pH 8.0 must be performed prior to the immunostaining.

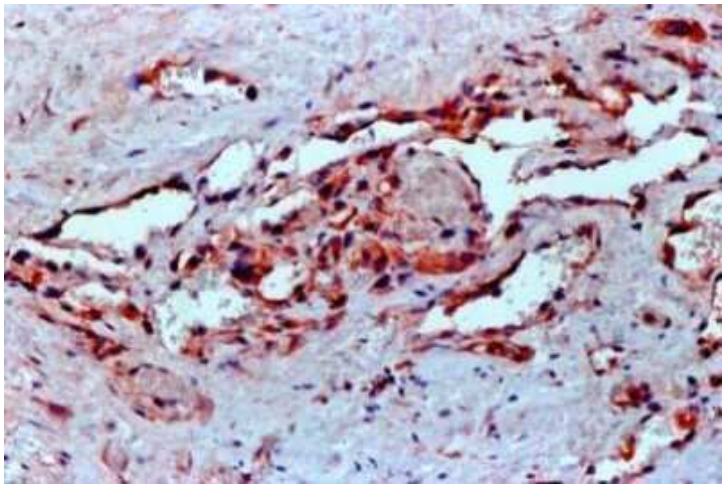
Protein Families: Druggable Genome, Secreted Protein

Protein Pathways: Bladder cancer, Cytokine-cytokine receptor interaction, Focal adhesion, mTOR signaling pathway, Pancreatic cancer, Pathways in cancer, Renal cell carcinoma, VEGF signaling pathway

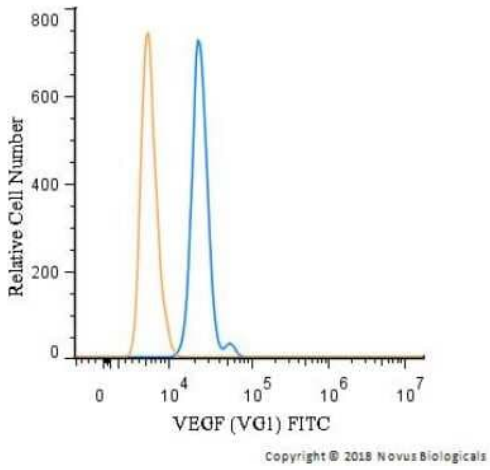
Product images:



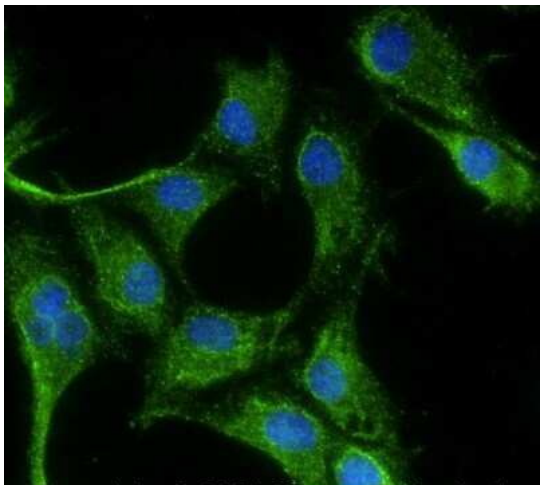
Analysis of VEGF in human kidney protein using TA336487.



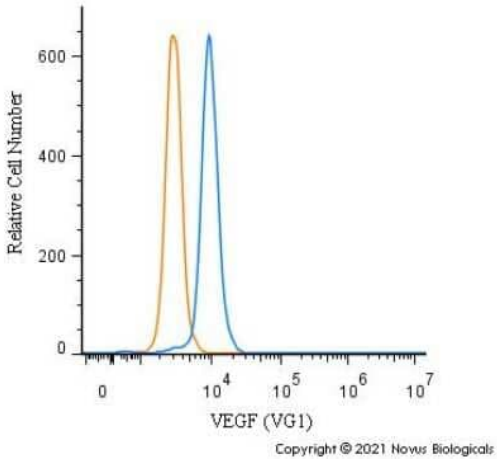
FFPE human angiosarcoma tissue section using VEGF antibody (clone VG1). The endothelial cells of the blood vessels and most of the cancer cells showed strong positivity for VEGF protein.



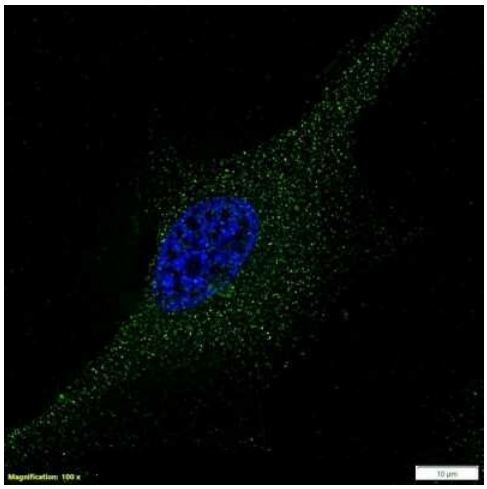
An intracellular stain was performed on U-937 cells with TA336487F (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeablized with 0.1% saponin. Cells were incubated in an antibody dilution of 10 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to FITC.



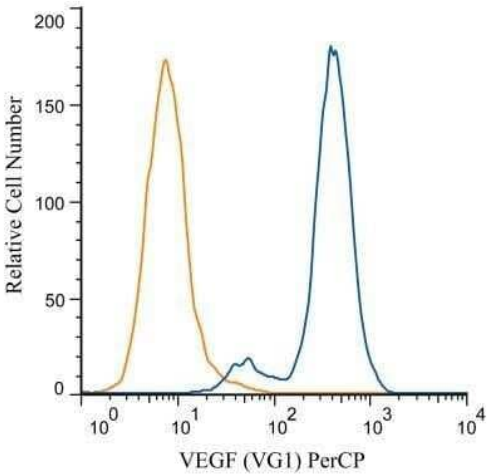
U87 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with anti- TA336487 at 1 ug/ml overnight at 4C and detected with an anti-mouse Dylight 488 (Green) at a 1:1000 dilution for 60 minutes. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.



An intracellular stain was performed on U-937 cells with TA336487 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 1.0 ug/mL for 30 minutes at room temperature, followed by Mouse IgG (H+L) Cross-Adsorbed Secondary Antibody, Dylight 550 (35503, Thermo Fisher).



U-87 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with anti- TA336487 at 2 ug/ml overnight at 4C and detected with an anti-mouse Dylight 488 (Green) at a 1:1000 dilution for 60 minutes. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.



Analysis of PerCP conjugate of TA336487. An intracellular stain was performed on HUVEC cells with VEGF (VG1) antibody TA336487PCP (blue) and a matched isotype control NBP2-27287PCP (orange). Cells were fixed with 4% PFA and then permeablized with 0.1% saponin. Cells were incubated in an antibody dilution of 10 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to PerCP.