

## VEGFA polyclonal antibody

Catalog: BS67765

Host: Rabbit

Reactivity: Human, Mouse, Rat

### Background:

Vascular endothelial growth factor-A (VEGF-A; formerly VEGF) belongs to the VEGF/PDGF family of growth factors that play a critical role in promoting vascular development. VEGF-A is primarily known for its function in promoting angiogenesis, the process by which new blood vessels are sprouted from pre-existing blood vessels. VEGF-A has eight isoforms, derived from differentially spliced mRNA variants encoded by the VEGF-A gene. All isoforms contain a conserved receptor binding domain, but differ in their C-terminal domains that regulate binding to components in the extracellular matrix. VEGF-A is secreted by multiple cell types, including fibroblasts, macrophages, and some tumor cells. Binding of VEGF-A to its cognate receptors (VEGFR2 and to a lesser extent VEGFR1) on the endothelial cell surface activates the receptor and initiates downstream signaling, resulting in endothelial cell proliferation, survival, migration, and changes to vascular permeability, all crucial processes for angiogenesis. Tumor cells have been shown to respond to hypoxia by increasing VEGF-A mRNA expression. Increased secretion of VEGF-A in the tumor microenvironment stimulates angiogenesis to further promote tumor progression. In addition to promoting tumor angiogenesis, VEGF-A has also been shown to play an important role in normal tissue development, tissue regeneration, tumor cell proliferation, neovascular eye diseases, and cancer immunity. For this reason, targeting angiogenesis via the VEGF-A pathway has been a major focus in cancer therapeutics research.

### Product:

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.

### Molecular Weight:

~ 16, 34, 40 kDa

### Swiss-Prot:

P15692

### Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

### Applications:

WB (1/500 - 1/1000), IHC (1/50 - 1/200), IF/ICC (1/50 - 1/200)

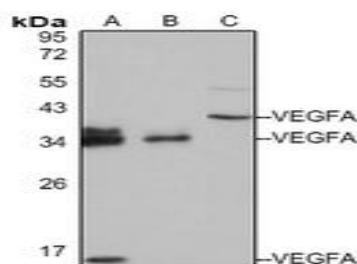
### Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

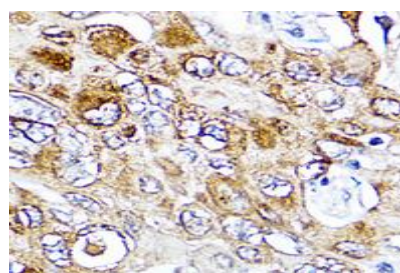
### Specificity:

Recognizes endogenous levels of VEGFA protein.

### DATA:



Western blot analysis of VEGFA expression in HEK293T (A), A549 (B), mouse liver (C) whole cell lysates.



Immunohistochemical analysis of VEGFA staining in human lung cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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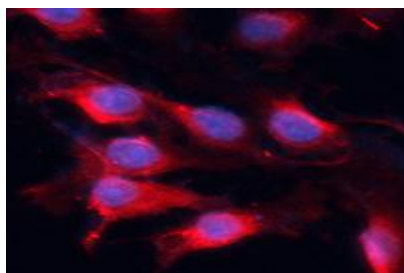
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## PRODUCT DATA SHEET

Bioworld Technology, Inc.



Immunofluorescent analysis of VEGFA staining in HUVEC cells. For-

malin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

### Note:

For research use only, not for use in diagnostic procedure.

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