



## Product Specification Sheet

### Humanized Monoclonal Anti-Human VEGF antibodies

□ **Cat.** VEGF19-M Humanized Monoclonal Anti-Human VEGF protein (Avastin/bevacizumab biosimilar) protein IgG1 (neutralizing)  
**SIZE:** 50 ug

Embryonic vascular system undergoes a series of complex, highly regulated series of events involving differentiation, migration and association of primitive endothelial cells. This process is termed vasculogenesis. Study of tumor angiogenesis has led to the identification of several proteins including basic fibroblast growth factor (bFGF) and vascular endothelial growth factor. VEGF acts by interacting with a family of largely endothelial-specific receptor tyrosine kinases that includes VEGFR-1 (flt-1), VEGFR-2 (flk-1/KDR), and VEGFR-3/Flt-4. Disruption of VEGFRs interferes with differentiation of endothelial cells and it is lethal for the embryo.

Vascular endothelial growth factors (VEGF/VEGF-A; isoforms; VEGF-A120, VEGF-A165, and VEGF-A188) mediate their actions by binding to the cell surface receptors VEGFR1 (FLT1) and VEGFR2 (KDR) receptors located in endothelial cells of the cardiovascular system. VEGFA is essential for adults during organ remodeling and diseases that involve blood vessels, for example, in wound healing, tumor angiogenesis, diabetic retinopathy, and age-related muscular degeneration. Anti-VEGFA therapy can be used to treat patients with undesirable angiogenesis and vascular leakage in cancer and eye diseases. **Avastin (Bevacizumab; Roche)** is a humanized monoclonal antibody (IgG1/149 kDa/CHO produced; 93% human, 7% mouse; original mouse clone A4.6.1) that inhibits all forms of VEGFs. Avastin-VEGF complex is both metabolized and excreted directly. Many diseases of the eye, such as age-related macular degeneration (AMD) and diabetic retinopathy. Ranibizumab/Lucentis, Fab2 fragment of avastin is approved for intraocular use. Like many humanized antibodies, avastin may induce anti-avastin antibodies (ADA/HADA). ADI also has ELISA kits to detect ADA to avastin.

### Source of Antigen and Antibodies

<b>Antigen</b>	Recombinant purified human VEGF165 protein
<b>Ab Host/type</b>	Humanized, monoclonal IgG1; ( <b>cat #VEGF19-M</b> ) produced and purified from CHO cells
<b>2-ab</b>	<b>Goat Anti-mouse IgG-HRP conjugate</b> Cat # 40320 (AP, biotin, FITC conjugates also available)
<b>-ve control IgG</b>	<b>Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control</b>

### Isotype Controls

Catalog#	ProdDescription
20102-101	Mouse IgG1 isotype control, purified
20102-101-1	Mouse IgG1 isotype control, purified
20102-101-APC	Mouse IgG1-APC conjugate (isotype control)
20102-101-B	Mouse IgG1-Biotin conjugate (isotype control)
20102-101-F	Mouse IgG1-FITC conjugate (isotype control)
20102-101-FP	Mouse IgG1-FITC-PE conjugate (isotype control)
20102-101-HP	Mouse IgG1-HRP conjugate (isotype control)
20102-101-PC5	Mouse IgG1-PE-Cy5 conjugate (isotype control)
20102-101-PE	Mouse IgG1-PE conjugate (isotype control)

### Form & Storage of Antibodies

#### Affinity pure IgG

( 100 ug/100ul ( solution ( lyophilized powder  
 Supplied in **Buffer:** PBS+0.1% azide  
 Reconstitute powder in water

#### Storage

Short-term: unopened, undiluted liquid vials at -20°C and powder at 4°C or -20°C..

Long-term: at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder.

### Recommended Usage

**Western Blotting** 0.5-2 ug/ml using ECL.

**ELISA** (0.1-1 ug/ml in direct ELISA. Detection limit is 1-5 ng/ml.

**Histochemistry & Immunofluorescence:** not tested. Suggested antibody concn 10-20 ug/ml.

### Immunoneutralization

This antibody will neutralize the biological activity of human VEGF (ND50=0.05-0.10 ug/ml) in the presence of 10 ng/ml of rhVEGF in HuVEC cells. ND50 will vary according to the cells and other conditions and it must be tested under specified conditions.

### Specificity & Cross-reactivity

VEGF19-M reacts with VEGF165 and VEGF121 isoforms. Antibody crossreactivity in other species is not established. We recommend the use of control VEGF proteins to establish antibody specificity.

\*This product is for in vitro research use only.

### Related material available from ADI

Catalog#	ProdDescription
200-800-AVG	Avastin/Bevacizumab (Anti-VEGF) ELISA Kit for human, 96 tests
200-810-ADG	Human Anti-Avastin/Bevacizumab IgG (anti-drug IgG) ELISA Kit 200-820-VEF
200-830-VEM	Human VEGF ELISA Kit, 96 tests
200-840-VER	Mouse VEGF ELISA Kit, 96 tests
200-850-FLT	Rat VEGF ELISA Kit, 96 tests
200-860-KDR	Human VEGFR1/FLT1 ELISA Kit, 96 tests
200-870-ID24	Human VEGFR2/KDR ELISA Kit, 96 tests
200-880-ID24	Avastin/Bevacizumab identification/Counterfeit detection ELISA Kit, 24 tests
200-880-ID24	Lucentis/Ranibizumab identification/Counterfeit detection ELISA Kit, 24 tests
200-880-LUG	Lucentis/Ranibizumab ELISA Kit for human, 96 tests
200-890-ALU	Human Anti-Lucentis/Ranibizumab IgG (anti-drug IgG) ELISA Kit for human, 96 tests

VEGF19-M

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