# Human VEGF R2/KDR/Flk-1 Antibody



Monoclonal Mouse IgG<sub>1</sub> Clone # 89106

Catalog Number: MAB3572

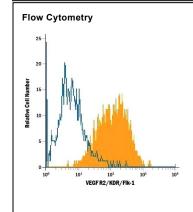
DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human VEGF R2/KDR/FIk-1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) VEGF R1, rhVEGF R3 or recombinant mouse VEGF R2 is observed.
Source	Monoclonal Mouse IgG <sub>1</sub> Clone # 89106
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	S. frugiperda insect ovarian cell line Sf 21-derived recombinant human VEGF R2/KDR/Flk-1 Ala20-Glu764 Accession # P35968
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

### **APPLICATIONS**

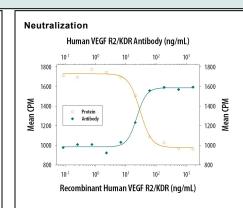
Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Sample
	Concentration
Flow Cytometry	2.5 μg/10 <sup>6</sup> cells See Below
Neutralization	Measured by its ability to neutralize VEGF R2/KDR/Flk-1-mediated inhibition of proliferation in HUVEC human umbilical vein endothelial cells. The Neutralization Dose (ND <sub>50</sub> ) is typically 10-50 ng/mL in the presence of
	50 ng/mL Recombinant Human VEGF R2/KDR/Flk-1 Fc Chimera and 5 ng/mL Recombinant Human VEGF <sub>165</sub> .

#### DATA



Detection of VEGF R2/KDR/FIk-1 in HUVEC Human Cells by Flow Cytometry. HUVEC human umbilical vein endothelial cells were stained with Mouse Anti-Human VEGF R2/KDR/FIk-1 Monoclonal Antibody (Catalog # MAB3572, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Phycoerythrinconjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B).



VEGF R2/KDR Inhibition of VEGF-dependent Cell Proliferation and Neutralization by Human VEGF R2/KDR Antibody. Recombinant Human VEGF R2/KDR Fc Chimera (Catalog # 357-KD) inhibits Recombinant Human VEGF<sub>165</sub> (Catalog # 293-VE) induced proliferation in HUVEC human . umbilical vein endothelial cells in a dose-dependent manner (orange line). Inhibition of Recombinant Human VEGF<sub>165</sub> (5 ng/mL) activity elicited by Recombinant Human VEGF R2/KDR Fc Chimera (50 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human VEGF R2/KDR Monoclonal Antibody (Catalog # MAB3572). The ND<sub>50</sub> is typically 10-50 ng/mL.

# PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C

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- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

# BACKGROUND

VEGF R2 (KDR/Flk-1), VEGF R1 (Flt-1) and VEGF R3 (Flt-4) belong to the class III subfamily of receptor tyrosine kinases (RTKs). All three receptors contain seven immunoglobulin-like repeats in their extracellular domains and kinase insert domains in their intracellular regions. The expression of VEGF R1, 2, and 3 is almost exclusively restricted to the endothelial cells. These receptors are likely to play essential roles in vasculogenesis and angiogenesis. Mature VEGF R2 is composed of a 745 aa extracellular domain, a 25 aa transmembrane domain and a 567 aa cytoplasmic domain. In contrast to VEGF R1 which binds both P/GF and VEGF with high affinity, VEGF R2 binds VEGF but not P/GF with high affinity. The recombinant soluble VEGF R2/Fc chimera binds VEGF with high affinity and is a potent VEGF antagonist.

## References:

1. Ferra, N. and R. Davis-Smyth (1997) Endocrine Reviews 18:4.

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