

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human VEGF R2/KDR/Fik-1 in direct ELISAs and Western blots. In direct ELISAs, approximately 40% cross-reactivity with recombinant mouse VEGF R2 is observed and less than 10% cross-reactivity with recombinant human (rh) VEGF R1 and rhVEGF R3 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human VEGF R2/KDR/Fik-1 Ala20-Glu764 Accession # AAC16450
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	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.

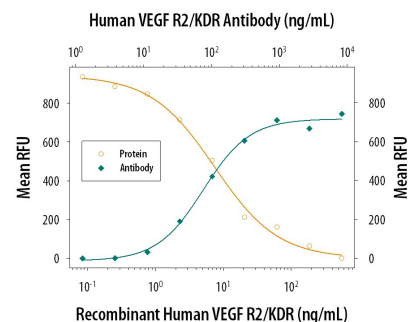
## APPLICATIONS

**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 Concentration	Sample
<b>Western Blot</b>	0.1 µg/mL	Recombinant Human VEGF R2/KDR/Fik-1 Fc Chimera (Catalog # 357-KD)
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below
<b>Neutralization</b>	Measured by its ability to neutralize VEGF R2/KDR/Fik-1-mediated inhibition of proliferation in HUVEC human umbilical vein endothelial cells. The Neutralization Dose (ND <sub>50</sub> ) is typically 0.05-0.25 µg/mL in the presence of 30 ng/mL Recombinant Human VEGF R2/KDR/Fik-1 Fc Chimera and 5 ng/mL Recombinant Human VEGF <sub>165</sub> .	

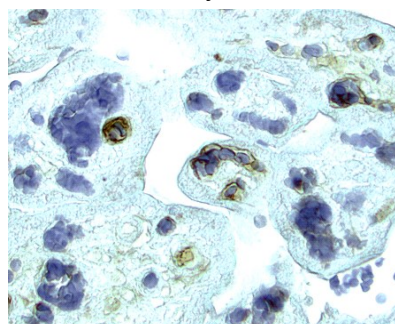
## DATA

### Neutralization



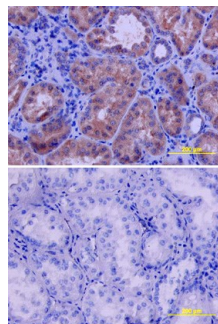
**VEGF R2/KDR/Fik-1 Inhibition of VEGF-dependent Cell Proliferation and Neutralization by Human VEGF R2/KDR/Fik-1 Antibody.** Recombinant Human VEGF R2/KDR/Fik-1 Fc Chimera (Catalog # 357-KD) inhibits Recombinant Human VEGF<sub>165</sub> (Catalog # 293-VE) induced proliferation in HUVEC human umbilical 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/Fik-1 Fc Chimera (30 ng/mL) is neutralized (green line) by increasing concentrations of Human VEGF R2/KDR/Fik-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF357). The ND<sub>50</sub> is typically 0.05-0.25 µg/mL.

### Immunohistochemistry



**VEGF R2/KDR/Fik-1 in Human Placenta.** VEGF R2/KDR/Fik-1 was detected in immersion fixed paraffin-embedded sections of human placenta using 15 µg/mL Goat Anti-Human VEGF R2/KDR/Fik-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF357) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-AEC Cell & Tissue Staining Kit (red; Catalog # CTS009) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

## Immunohistochemistry



### VEGF R2/KDR/Fik-1 in Human Kidney.

VEGF R2/KDR/Fik-1 was detected in immersion fixed paraffin-embedded sections of human kidney using Goat Anti-Human VEGF R2/KDR/Fik-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF357) at 10 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

VEGF R2 (KDR/Fik-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.

VEGF R2 cDNA encodes a 1356 amino acid (aa) residue precursor protein with a 19 aa residue signal peptide. Mature VEGF R2 is composed of a 745 aa residue extracellular domain, a 25 aa residue transmembrane domain and a 567 aa residue 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. Ferrà, N. and R. Davis-Smyth (1997) *Endocrine Reviews* **18**:4.