

DESCRIPTION

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| Species Reactivity | Human |
| Specificity | Detects human VEGF R2 in direct ELISAs and Western blots. In Western blots, this antibody does not cross-react with recombinant human (rh) VEGF R1, rhVEGF R3, or recombinant mouse VEGF R2. |
| Source | Monoclonal Mouse IgG ₁ Clone # 89115 |
| Purification | Protein A or G purified from ascites |
| Immunogen | <i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human VEGF R2 Ala20-Glu764 Accession # P35968 |
| 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. |

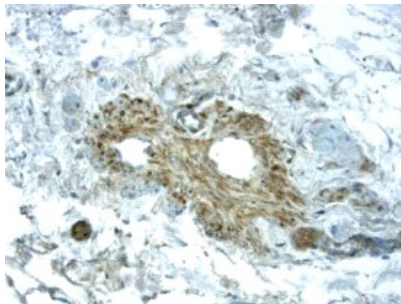
APPLICATIONS

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 Concentration | Sample |
|-----------------------------|---------------------------|--|
| Western Blot | 1 µg/mL | Recombinant Human VEGF R2/KDR/Fik-1 Fc Chimera (Catalog # 357-KD) under non-reducing conditions only. It is recommended to use Goat Anti-Human VEGF R2/KDR/Fik-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF357) |
| Immunocytochemistry | 5-25 µg/mL | See Below |
| Immunohistochemistry | 8-25 µg/mL | See Below |

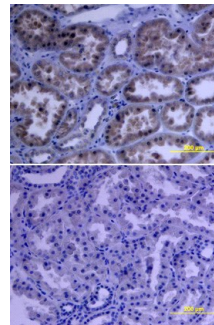
DATA

Immunohistochemistry



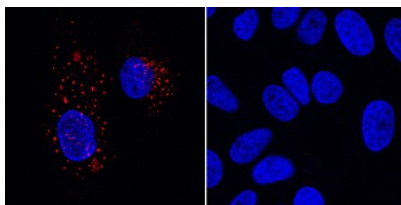
VEGF R2/KDR/Fik-1 in Human Placenta. VEGF R2/KDR/Fik-1 was detected in immersion fixed paraffin-embedded sections of human placenta using 25 µg/mL Human VEGF R2/KDR/Fik-1 Monoclonal Antibody (Catalog # MAB3571) overnight at 4 °C. Tissue was stained with the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) 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 array using Human VEGF R2/KDR/Fik-1 Monoclonal Antibody (Catalog # MAB3571) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) 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](#).

Immunocytochemistry



VEGF R2/KDR/Fik-1 in HUVECs and Human HeLa Cell Line. VEGF R2/KDR/Fik-1 was detected in immersion fixed human umbilical vein endothelial cells (HUVECs; left panel) but is not detected in HeLa human cervical epithelial carcinoma cell line (right panel) using Mouse Anti-Human VEGF R2/KDR/Fik-1 Monoclonal Antibody (Catalog # MAB3571) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm of HUVECs. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

PREPARATION AND STORAGE

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|--------------------------------|--|
| 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 |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none">● 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.

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 PlGF and VEGF with high affinity, VEGF R2 binds VEGF but not PlGF 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.