

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse VEGFR2 in direct ELISAs and Western blots. In direct ELISAs, approximately 10% cross-reactivity with recombinant human VEGFR2 is observed and less than 2% cross-reactivity with recombinant mouse (rm) VEGFR1 and rmVEGFR3 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse VEGFR2 Ala20-Glu762 Accession # P35918
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 either lyophilized or as a 0.2 µm filtered solution in PBS.

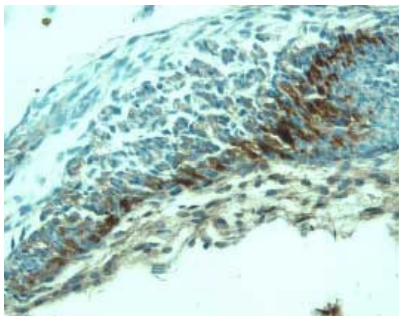
APPLICATIONS

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	0.1 µg/mL	Recombinant Mouse VEGFR2/KDR/Flk-1 Fc Chimera (Catalog # 443-KD)
Flow Cytometry	2.5 µg/10 ⁶ cells	bEnd.3 mouse endothelioma cell line
Immunohistochemistry	5-15 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
Neutralization	Measured by its ability to neutralize VEGFR2/KDR/Flk-1-mediated inhibition of proliferation in HUVEC human umbilical vein endothelial cells. The Neutralization Dose (ND ₅₀) is typically 0.1-0.3 µg/mL in the presence of 50 ng/mL Recombinant Mouse VEGFR2/KDR/Flk-1 Fc Chimera and 5 ng/mL Recombinant Mouse VEGF ₁₆₄ .	

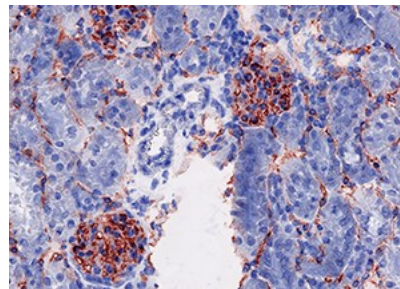
DATA

Immunohistochemistry

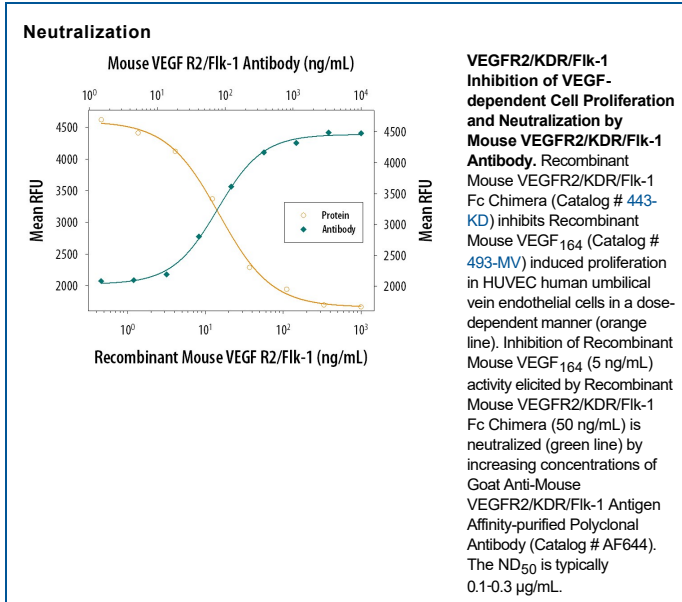


VEGFR2/KDR/Flk-1 in Mouse Embryo. VEGFR2/KDR/Flk-1 was detected in immersion fixed frozen sections of mouse embryo (14 d.p.c.) using 15 µg/mL Goat Anti-Mouse VEGFR2/KDR/Flk-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF644) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to mesenchymal cells. View our protocol for [Chromogenic IHC Staining of Frozen Tissue Sections](#).

Immunohistochemistry



VEGFR2 in Mouse Kidney Tissue. VEGFR2 was detected in acetone fixed cryosections of mouse kidney tissue using Goat Anti-Mouse VEGFR2/KDR/Flk-1 Polyclonal Antibody (Catalog # AF644) for 50 minutes at room temperature. Tissues were stained with rabbit anti-goat secondary antibody and HRP polymer-conjugated anti-rabbit IgG followed by AEC+Substrate Chromogen (red) followed by counterstaining with hematoxylin (blue). Experiments were carried out and the image was provided by Dr. Grietje Molema, University Medical Center Groningen, The Netherlands.



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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

VEGFR2 (KDR/Flk-1), VEGFR1 (Flt-1), and VEGFR3 (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 VEGFR1, 2, and 3 is almost exclusively restricted to the endothelial cells. These receptors are likely to play essential roles in vasculogenesis and angiogenesis.

Mouse VEGFR2 cDNA encodes a 1367 amino acid (aa) residue precursor protein with a 19 aa residue signal peptide. Mature VEGFR2 is composed of a 743 aa residue extracellular domain, a 22 aa residue transmembrane domain and a 583 aa residue cytoplasmic domain. In contrast to VEGFR1 which binds both PIGF and VEGF with high affinity, VEGFR2 binds VEGF but not PIGF with high affinity. The recombinant soluble VEGFR2/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.
2. Achen, M.G. *et al.* (1998) *Proc. Natl. Acad. Sci. USA* **95**:548.