

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse VEGF R2/KDR/Fik-1.
Source	Monoclonal Rat IgG ₁ Clone # 522302
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse VEGF R2/KDR/Fik-1 Ala20-Glu762 Accession # P35918
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
Flow Cytometry	2.5 µg/10 ⁶ cells	See Below
Immunocytochemistry	8-25 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.	

DATA

<p>Flow Cytometry</p>	<p>Detection of VEGF R2/KDR/Fik-1 in bEnd.3 Mouse Cell Line by Flow Cytometry. bEnd.3 mouse endothelioma cell line was stained with Rat Anti-Mouse VEGF R2/KDR/Fik-1 Monoclonal Antibody (Catalog # MAB4432, filled histogram) or isotype control antibody (Catalog # MAB005, open histogram), followed by Allophycocyanin-conjugated Anti-Rat IgG F(ab')₂ Secondary Antibody (Catalog # F0113).</p>	<p>Immunocytochemistry</p>	<p>VEGF R2/KDR/Fik-1 in bEnd.3 Mouse Cell Line. VEGF R2/KDR/Fik-1 was detected in immersion fixed bEnd.3 mouse endothelioma cell line using 10 µg/mL Rat Anti-Mouse VEGF R2/KDR/Fik-1 Monoclonal Antibody (Catalog # MAB4432) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # NL013) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p>
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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
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/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 endothelial cells. These receptors are likely to play essential roles in vasculogenesis and angiogenesis. Mature mouse VEGF R2 is composed of a 743 amino acid (aa) extracellular domain, a 22 aa transmembrane domain, and a 583 aa cytoplasmic domain. In contrast to VEGF R1 which binds both PIGF and VEGF with high affinity, VEGF R2 binds VEGF but not PIGF with high affinity.

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.