

DESCRIPTION

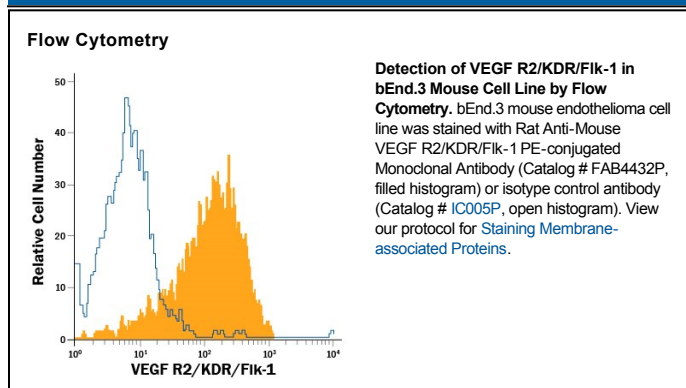
Species Reactivity	Mouse
Specificity	Detects mouse VEGF R2/KDR/Fik-1 in flow cytometry.
Source	Monoclonal Rat IgG ₁ Clone # 522302
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse VEGF R2/KDR/Fik-1 Ala20-Glu762 Accession # P35918
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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	10 μ L/10 ⁶ cells	See Below

DATA



PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

VEGF R2, also known as KDR, Flk-1, and CD309, is a 210-220 kDa type I transmembrane glycoprotein member of the 7-Ig/Class V subfamily that belongs to the tyrosine protein kinase family of molecules (1, 2). It is principally expressed on endothelial cells (EC), but also appears on neurons, mast cells, immature dendritic cells and monocytes (3-6). VEGF R2 serves as the major proangiogenic switch that regulates blood vessel development and repair (1, 2). It is known to bind VEGF-A, -C, and -D. On the cell surface, VEGF R2 either homodimerizes or heterodimerizes with VEGF R3 (1). As a homodimer, it appears to interact with Neuropilin-1 (7). It also interacts with Integrin β 3 subunit, either through its extracellular domain or cytoplasmic tail (8). This interaction may be necessary for EC activation. Notably, VEGF R2 can also be activated in the absence of a VEGF ligand when under torsion stress and in a complex with CD31 and VE-Cadherin (9). Over amino acids 20-762, mouse VEGF R2 shares 93% and 80% amino acid sequence identity with rat and human VEGF R2, respectively.

References:

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3. Le, X-F. *et al.* (2008) *Cell Cycle* **7**:3747.
4. Okabe, K. *et al.* (2014) *Cell* **159**:584.
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8. Somanath, P.R. *et al.* (2009) *Angiogenesis* **12**:177.
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