

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse VEGF R1 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human VEGF R1, recombinant mouse (rm) VEGF R2, or rmVEGF R3 is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 141515
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse VEGF R1 Ser27-Glu759 Accession # P35969
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 Mouse VEGF R1/Flt-1 Fc Chimera (Catalog # 471-F1)
Immunohistochemistry	8-25 µg/mL	Perfusion fixed frozen sections of mouse thymus and kidney

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	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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 R1 (also called Flt-1) is one of the five receptor tyrosine kinases (RTKs) (VEGF R1, KDR/Flk-1, Flt-4, Tie-1, and Tek/Tie-2) whose expression is almost exclusively restricted to the endothelial cells. Tie-1 and Tie-2/Tek define a class of RTKs containing two immunoglobulin-like domains, three EGF homology domains and three fibronectin type III domains in their extracellular regions. VEGF R1/Flt-1, VEGF R2/KDR/Flk-1, VEGF R3/Flt-4 are members of the class III subfamily of RTKs containing seven immunoglobulin-like repeats in their extracellular domains. All five RTKs are likely to play central roles in vasculogenesis and angiogenesis.

Full length mouse VEGF R1 mRNA encodes a 1333 amino acid (aa) residue precursor with a 22 aa residue signal peptide. Mature VEGF R1 is composed of a 737 aa residue extracellular domain, a 22 aa residue transmembrane domain and a 552 aa residue cytoplasmic domain. As a result of alternative splicing of the mRNA, a cDNA encoding a truncated form of VEGF R1, lacking the seventh immunoglobulin-like domain, the transmembrane and intracellular domains, has been cloned. The recombinant soluble VEGF R1/Fc chimera binds VEGF and PlGF with high affinity and is a potent VEGF antagonist.

References:

1. He, Y. *et al.* (1999) *Molecular Endocrinology* **13**:537.
2. Ferrara, N. and T. Davis-Smyth (1997) *Endocrine Reviews* **8**:4.