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#2893

## VEGF Receptor 1 Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

<b>Applications:</b> W	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 180	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #P17948	<b>Entrez-Gene Id:</b> 2321
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### Product Usage Information

#### Application

Western Blotting

#### Dilution

1:1000

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

### Specificity/Sensitivity

VEGF Receptor 1 Antibody detects endogenous levels of VEGFR-1. This antibody does not cross-react with VEGFR-2 and -3 nor does it detect the sVEGFR-1 variant.

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Thr1307 of human VEGFR-1. Antibodies are purified by protein A and peptide affinity chromatography.

### Background

The vascular endothelial growth factor (VEGF) receptor (VEGFR-1, Flt-1) is a 180 kDa receptor tyrosine kinase belonging to the VEGFR (Flt) family (1-3). The receptor is comprised of seven extracellular Ig-like domains, a single transmembrane region and cytoplasmic tail containing the active kinase domain (1,2). VEGFR-1 plays an important role in endothelial cell function and normal vascular development, as well as in hematopoietic function (2,3). VEGF-A is a high affinity ligand of VEGFR-1. VEGFR-1 also binds VEGF-B and PLGF (2). Ligand binding results in very little VEGFR-1 kinase activation, and VEGFR-1/VEGF-A binding negatively regulates VEGF function by diverting the growth factor from other functional VEGF receptors (3).

Two forms of the VEGF receptor 1 are found in cells. Both the membrane-bound form described above and a soluble isoform of VEGFR-1 (sVEGFR-1 or sFlt-1) bind the VEGF ligand with high affinity (4). Full-length VEGFR-1 and the truncated, soluble protein are encoded by the same gene and are generated through differential splicing. Both proteins are associated with an array of human disorders and are potential candidates for therapeutic study (5).

### Background References

1. Ferrara, N. et al. (2003) *Nat Med* 9, 669-76.
2. Clauss, M. (2000) *Semin Thromb Hemost* 26, 561-9.
3. Claesson-Welsh, L. (2003) *Biochem Soc Trans* 31, 20-4.
4. Kendall, R.L. et al. (1996) *Biochem Biophys Res Commun* 226, 324-8.
5. Shibuya, M. (2006) *Angiogenesis* 9, 225-30; discussion 231.

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

### Applications Key

**W:** Western Blotting

### Cross-Reactivity Key

**H:** Human

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