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Store at -20C  
#2471

## Phospho-VEGF Receptor 2 (Tyr951) Antibody

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

<b>Applications:</b> W	<b>Reactivity:</b> H M	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 230	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #P35968	<b>Entrez-Gene Id:</b> 3791
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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

Phospho-VEGF Receptor 2 (Tyr951) Antibody detects endogenous VEGFR-2 only when phosphorylated at Tyr951.

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr951 of human VEGFR-2. Antibodies are purified by protein A and peptide affinity chromatography.

### Background

Vascular endothelial growth factor receptor 2 (VEGFR2, KDR, Flk-1) is a major receptor for VEGF-induced signaling in endothelial cells. Upon ligand binding, VEGFR2 undergoes autophosphorylation and becomes activated (1). Major autophosphorylation sites of VEGFR2 are located in the kinase insert domain (Tyr951/996) and in the tyrosine kinase catalytic domain (Tyr1054/1059) (2). Activation of the receptor leads to rapid recruitment of adaptor proteins, including Shc, GRB2, PI3 kinase, NCK, and the protein tyrosine phosphatases SHP-1 and SHP-2 (3). Phosphorylation at Tyr1212 provides a docking site for GRB2 binding and phospho-Tyr1175 binds the p85 subunit of PI3 kinase and PLCγ, as well as Shb (1,4,5). Signaling from VEGFR2 is necessary for the execution of VEGF-stimulated proliferation, chemotaxis and sprouting, as well as survival of cultured endothelial cells *in vitro* and angiogenesis *in vivo* (6-8).

### Background References

1. Meyer, M. et al. (1999) *EMBO J* 18, 363-74.
2. Dougher-Vermazen, M. et al. (1994) *Biochem Biophys Res Commun* 205, 728-38.
3. Kroll, J. and Waltenberger, J. (1997) *J Biol Chem* 272, 32521-7.
4. Takahashi, T. et al. (2001) *EMBO J* 20, 2768-78.
5. Holmqvist, K. et al. (2004) *J Biol Chem* 279, 22267-75.
6. Karkkainen, M.J. and Petrova, T.V. (2000) *Oncogene* 19, 5598-605.
7. Rahimi, N. et al. (2000) *J Biol Chem* 275, 16986-92.
8. Claesson-Welsh, L. (2003) *Biochem Soc Trans* 31, 20-4.

### 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 **M:** Mouse

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