

#3817 Store at -20°C

Phospho-VEGF Receptor 2 (Tyr1059) (D5A6) Rabbit mAb



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Applications: WB	Reactivity: H M	Sensitivity: Endogenous	MW (kDa): 230	Source/Isotype: Rabbit IgG	UniProt ID: #P17948, #P35968, #P35916	Entrez-Gene Id: 2321, 3791, 2324
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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, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	Phospho-VEGF Receptor 2 (Tyr1059) (D5A6) Rabbit mAb only detects endogenous levels of VEGFR2 proteins when phosphorylated at Tyr1059. Since VEGF receptors 1, 2 and 3 share identical sequences within the epitope region, this antibody can also detect VEGF receptors 1 and 3 when phosphorylated at corresponding tyrosine residues.	
Species predicted to react based on 100% sequence homology:	Rat	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr1059 of human VEGF receptor 2.	
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 <i>in vitro</i> and angiogenesis <i>in vivo</i> (6-8).	
Background References	<ol style="list-style-type: none"> 1. Meyer, M. et al. (1999) <i>EMBO J</i> 18, 363-74. 2. Dougher-Vermazen, M. et al. (1994) <i>Biochem Biophys Res Commun</i> 205, 728-38. 3. Kroll, J. and Waltenberger, J. (1997) <i>J Biol Chem</i> 272, 32521-7. 4. Takahashi, T. et al. (2001) <i>EMBO J</i> 20, 2768-78. 5. Holmqvist, K. et al. (2004) <i>J Biol Chem</i> 279, 22267-75. 6. Karkkainen, M.J. and Petrova, T.V. (2000) <i>Oncogene</i> 19, 5598-605. 7. Rahimi, N. et al. (2000) <i>J Biol Chem</i> 275, 16986-92. 8. Claesson-Welsh, L. (2003) <i>Biochem Soc Trans</i> 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	WB: Western Blotting
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected

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