

Cat. No:	MAB-94234
Conjugate:	Unconjugated
Size:	100 ug
Clone:	D5A6
Concentration:	1mg/ml
Host:	Rb
Isotype:	IgG
Reactivity:	H M
Applications:	WB 1:1000
Molecular Weight:	230 kDa

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 PLC γ , 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). Phospho-VEGF Receptor 2 (Tyr1059) (D5A6) Rabbit mAb only detects endogenous levels of VEGFR 2 proteins when phosphorylated at Tyr1059.

Form:	liquid
Buffer:	PBS with 0.02% sodium azide, 50% glycerol, pH 7.4
Storage:	Store at -20°C. Avoid freeze / thaw cycles

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

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