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VEGF Receptor 2 (D5B1) Rabbit mAb (PE Conjugate)



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Source/Isotype: Entrez-Gene Id: Applications: Reactivity: Sensitivity: **UniProt ID:** FC-FP $\mathsf{H}\,\mathsf{M}\,\mathsf{R}$ Endogenous Rabbit IgG #P35968 3791 **Product Usage** Application Dilution Information Flow Cytometry (Fixed/Permeabilized) 1:50 Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the **Storage** antibodies. Protect from light. Do not freeze. Specificity / Sensitivity VEGF Receptor 2 (D5B1) Rabbit mAb (PE Conjugate) recognizes endogenous levels of total VEGF receptor 2 protein. Monoclonal antibody is produced by immunizing animals with a recombinant protein containing the Source / Purification carboxy-terminal 150 amino acid residues of human VEGF receptor 2 protein. This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct **Product Description** flow cytometry analysis in human cells. The antibody is expected to exhibit the same species cross-

reactivity as the unconjugated VEGF Receptor 2 (D5B1) Rabbit mAb #9698.

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, Pl3 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 Pl3 kinase and PLCy, 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) $\it EMBO J$ 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).

Applications Key

FC-FP: Flow Cytometry (Fixed/Permeabilized)

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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