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VEGF Receptor 2 (D5B1) Rabbit mAb (Alexa Fluor® 488 Conjugate)

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

Applications: FC-FP	Reactivity: H M R	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #P35968	Entrez-Gene Id: 3791
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Product Usage Information

Application

Flow Cytometry (Fixed/Permeabilized)

Dilution

1:50

Storage

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 antibody. Protect from light. Do not freeze.

Specificity/Sensitivity

VEGF Receptor 2 (D5B1) Rabbit mAb (Alexa Fluor® 488 Conjugate) recognizes endogenous levels of total VEGF receptor 2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a recombinant protein containing the carboxy-terminal 150 amino acid residues of human VEGF receptor 2 protein.

Description

This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct 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, 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) <cite>EMBO J</cite> 18, 363-74.
2. Dougher-Vermazen, M. et al. (1994) <cite>Biochem Biophys Res Commun</cite> 205, 728-38.
3. Kroll, J. and Waltenberger, J. (1997) <cite>J Biol Chem</cite> 272, 32521-7.
4. Takahashi, T. et al. (2001) <cite>EMBO J</cite> 20, 2768-78.
5. Holmqvist, K. et al. (2004) <cite>J Biol Chem</cite> 279, 22267-75.
6. Karkkainen, M.J. and Petrova, T.V. (2000) <cite>Oncogene</cite> 19, 5598-605.
7. Rahimi, N. et al. (2000) <cite>J Biol Chem</cite> 275, 16986-92.
8. Claesson-Welsh, L. (2003) <cite>Biochem Soc Trans</cite> 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

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