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## VEGF Receptor 2 (D5B1) Rabbit mAb (Alexa Fluor® 555 Conjugate)



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

Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IF-F	H M R	Endogenous	Rabbit IgG	#P35968	3791

### Product Usage Information

#### Application

Immunofluorescence (Frozen)

#### 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® 555 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® 555 fluorescent dye and tested in-house for immunofluorescent analysis in rat 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

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- Dougher-Vermazen, M. et al. (1994) *Biochem Biophys Res Commun* 205, 728-38.
- Kroll, J. and Waltenberger, J. (1997) *J Biol Chem* 272, 32521-7.
- Takahashi, T. et al. (2001) *EMBO J* 20, 2768-78.
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- Karkkainen, M.J. and Petrova, T.V. (2000) *Oncogene* 19, 5598-605.
- Rahimi, N. et al. (2000) *J Biol Chem* 275, 16986-92.
- 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

**IF-F:** Immunofluorescence (Frozen)

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat

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