

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

✓ 100 µl  
 (50 tests)

New 07/13



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**For Research Use Only. Not For Use In Diagnostic Procedures.**

**Entrez Gene ID** #3791  
**UniProt ID** #P35968

Applications	Species Cross-Reactivity*	Isotype
F Endogenous	H, M, R	Rabbit IgG

**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.

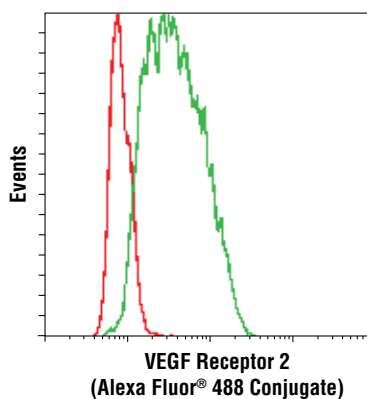
**Background:** Vascular endothelial growth factor receptor 2 (VEGFR2, KDR, Flk-1) is a major receptor for VEGF-induced signaling in endothelial cells. Upon ligand binding, VEGFR2 undergoes autophosphorylation and becomes activated (1). Major autophosphorylation sites of VEGFR2 are located in the kinase 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).

**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.

## Background 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.



Flow cytometric analysis of HUVEC cells using VEGF Receptor 2 (D5B1) Rabbit mAb (Alexa Fluor® 488 Conjugate) (green) compared to concentration-matched Rabbit (DA1E) mAb IgG XP® Isotype Control (Alexa Fluor® 488 Conjugate) #2975 (red).

**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 antibodies.* Protect from light. Do not freeze.

**\*Species cross-reactivity is determined by western blot using the unconjugated antibody.**

## Recommended Antibody Dilutions:

Flow Cytometry 1:50

**For product specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).**

**Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended complementary products.**

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**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.