

# VEGF Receptor 2 (55B11) Rabbit mAb (Alexa Fluor® 488 Conjugate)

✓ 100 µl  
(50 tests)

New more concentrated formulation

New 12/08/09

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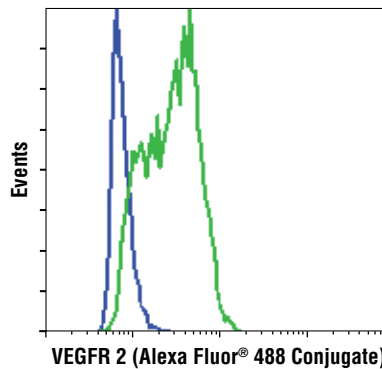
Applications	Species Cross-Reactivity*		Isotype
	F	H, M	
Endogenous			Rabbit IgG

**Description:** This Cell Signaling Technology (CST) antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct flow cytometry in human cells. The unconjugated VEGF Receptor 2 (55B11) Rabbit mAb #2479 reacts with human and mouse VEGF receptor 2 protein. CST expects that VEGF Receptor 2 (55B11) Rabbit mAb (Alexa Fluor® 488 Conjugate) will also recognize VEGF receptor 2 in these species.

**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, PI-3 kinase, Nck and the protein tyrosine phosphatases SHP-1 and SHP-2 (3). The phosphorylation of Tyr1212 provides a docking site for Grb2 binding and phospho-Tyr1175 binds with the p85 subunit of PI-3 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 (55B11) Rabbit mAb (Alexa Fluor® 488 Conjugate) detects endogenous levels of total VEGF receptor 2 protein. This antibody does not cross-react with other family members.

**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. This antibody was conjugated to Alexa Fluor® 488 under optimal conditions with an F/P ratio of 2-6.



Flow cytometric analysis of untreated HeLa cells (blue) and HUVEC (green) using VEGF Receptor 2 (55B11) Rabbit mAb (Alexa Fluor® 488 Conjugate).

#### Background References:

- (1) Meyer, M. et al. (1999) *EMBO J.* 18, 363-374.
- (2) Dougher-Vermazen, M. et al. (1994) *Biochem. Biophys. Res. Commun.* 205, 728-738.
- (3) Kroll, J. and Waltenberger, J. (1997) *J. Biol. Chem.* 272, 32521-32527.
- (4) Takahashi, T. et al. (2001) *EMBO J.* 20, 2768-2778.
- (5) Holmqvist, K. et al. (2004) *J. Biol. Chem.* 279, 22267-22275.
- (6) Karkkainen, M.J. and Petrova, T. (2000) *Oncogene* 19, 5598-5605.
- (7) Rahimi, N. et al. (2000) *J. Biol. Chem.* 275, 16986-16992.
- (8) Claesson-Welsh, L. (2003) *Biochem. Soc. Trans.* 31, 20-24.

Entrez-Gene ID #3791  
Swiss-Prot Acc. #P35968

**Storage:** Supplied in PBS (pH 7.2), less than 0.1% sodium azide, and 2 mg/ml BSA. Store at 4°C. *Protect from light. Do not freeze.*

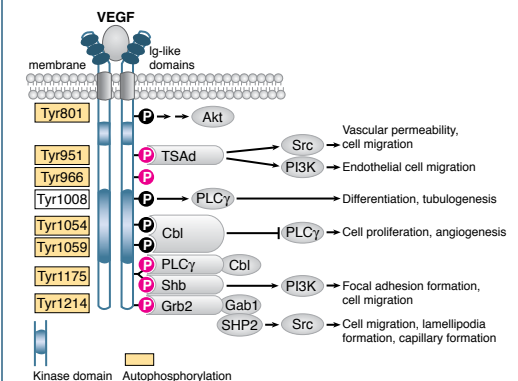
\*Species cross-reactivity other than human is determined by western blot using the unconjugated antibody.

#### Recommended Antibody Dilutions:

Flow Cytometry 1:50

For application 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 companion products.



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