

# Phospho-VEGF Receptor 2 (Tyr951) (15D2) Rabbit mAb



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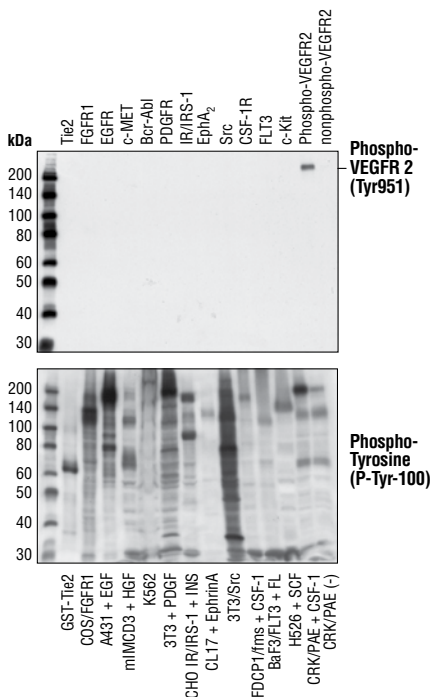
**For Research Use Only. Not For Use In Diagnostic Procedures.**

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IHC-P Endogenous	H, M	230 kDa	Rabbit IgG**

**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 PLC $\gamma$ , 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:** Phospho-VEGF Receptor 2 (Tyr951) (15D2) Rabbit mAb detects endogenous levels of VEGF receptor 2 only when phosphorylated at Tyr951. The antibody may slightly cross-react with activated VEGF receptor 1, but not with other related tyrosine phosphorylated tyrosine kinases.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr951 of human VEGF receptor 2.



*Phospho-VEGF Receptor 2 (Tyr951) (15D2) Rabbit mAb specifically binds to phosphorylated VEGFR2, but not other phosphorylated tyrosine kinases. Western blot analysis of extracts from cells expressing different activated tyrosine kinase proteins using Phospho-VEGF Receptor-2 (Tyr951) (15D2) Rabbit mAb (upper) or Phospho-Tyrosine Mouse mAb (P-Tyr-100) #9411 (lower). CRK/PAE cells (lanes 13 and 14) express chimeric receptors containing human CSF-1 extracellular binding domain/mouse VEGF receptor-2 intracellular domain (5). CSF-1 stimulates phosphorylation of Tyr951 of intracellular VEGF receptor-2 domain (lane 13), which was specifically detected by Phospho-VEGF Receptor-2 (Tyr951) (15D2) Rabbit mAb.*

Entrez-Gene ID #3791  
UniProt ID #P35968

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody

#### Recommended Antibody Dilutions:

Western Blotting	1:1000
Immunohistochemistry (Paraffin)	1:50
Unmasking buffer:	EDTA
Antibody diluent:	TBST-5%NGS

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.

#### 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.

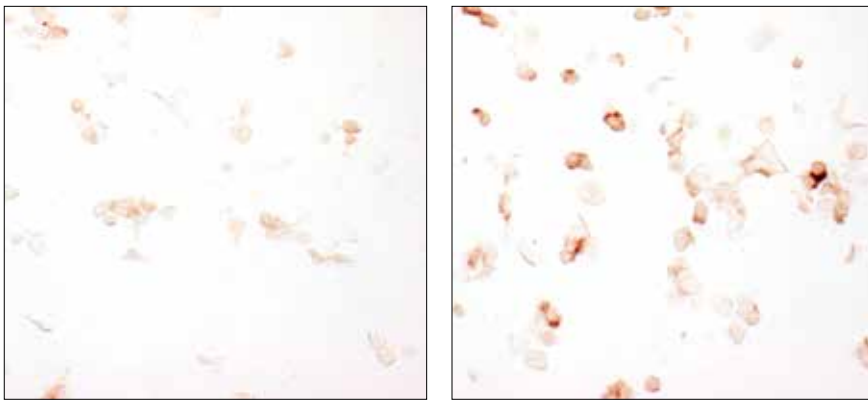
U.S. Patent No. 5,675,063

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.**

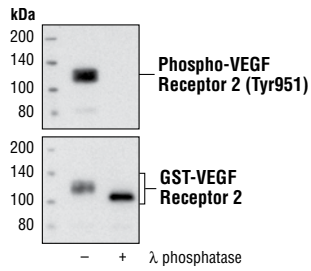
**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

**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.



Immunohistochemical analysis of paraffin-embedded HUVEC cells, untreated (left) or VEGF-treated (right) using Phospho-VEGF Receptor-2 (Tyr951) (15D2) Rabbit mAb.



Western blot analysis of recombinant human GST-VEGF Receptor 2 (Val789-Val1356), untreated or  $\lambda$  phosphatase-treated, using Phospho-VEGF Receptor 2 (Tyr951) (15D2) Rabbit mAb (upper) and VEGF Receptor 2 Antibody # 2472 (lower).