

Phospho-VEGF Receptor 2 (Tyr951) Antibody

100 µl
 (10 western blots)

Orders ■ 877-616-CELL (2355)
 orders@cellsignal.com
Support ■ 877-678-TECH (8324)
 info@cellsignal.com
Web ■ www.cellsignal.com

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

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

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

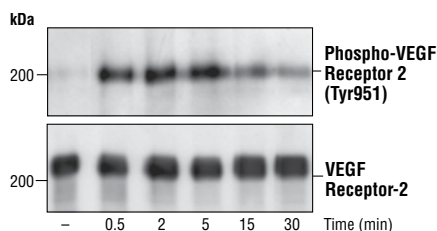
Background: Vascular endothelial growth factor receptor 2 (VEGFR2, KDR, Flk-1) is a major receptor transducing VEGF-induced signaling in endothelial cells. Upon ligand binding, VEGFR2 undergoes autophosphorylation and becomes activated (1). Major autophosphorylation sites of VEGFR2 are located in the 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: Phospho-VEGF Receptor 2 (Tyr951) Antibody detects endogenous VEGFR-2 only when phosphorylated at Tyr951.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr951 of human VEGFR-2. Antibodies are purified by protein A and peptide affinity chromatography.

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.



Western blot analysis of extracts of CKR/PAE cells expressing chimeric receptors containing human CSF-1 extracellular binding domain/mouse VEGFR-2 intracellular domains (Rahimi, N. et al. [2000] *J. Biol. Chem.* 275, 16986-16992), using Phospho-VEGF Receptor 2 (Tyr951) Antibody (upper) or VEGF receptor 2 antibody (lower).

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. 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

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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.