Store at -20°C

#2471

Phospho-VEGF Receptor 2 (Tyr951) Antibody

Cell Signaling TECHNOLOGY®

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rev. 12/23/15

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

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

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

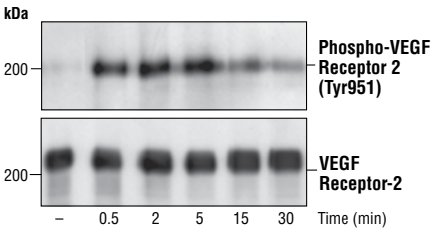
Background: Vascular endothelial growth factor receptor 2 (VEGFR2, KDR, Flk-1) is a major receptor for VEGF-induced signaling in endothelial cells. Upon ligand binding, VEGFR2 undergoes autophosphorylation and becomes activated (1). Major autophosphorylation sites of VEGFR2 are located in the kinase 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: 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, 363-74.
(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.



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.