

Store at
-20°C

VEGF Receptor 2 (55B11) Rabbit mAb

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#2479

Small 100 µl (10 western blots)
Large 300 µl (30 western blots)Support: 877-678-TECH (8324)
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orders@cellsignal.comEntrez-Gene ID #3791
UniProt ID #P35968

rev. 07/11/14

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Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IHC-P, IF-IC, IF-Endogenous	H, M	210, 230 kDa	Rabbit IgG**

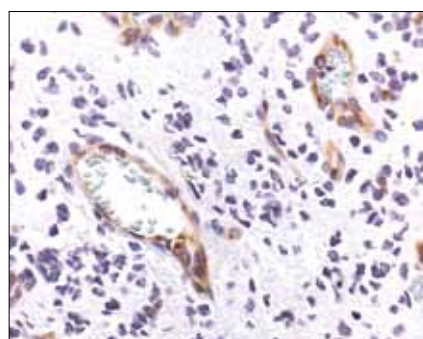
Background: Vascular endothelial growth factor receptor 2 (VEGFR2, KDR, Flk-1) is a major receptor for VEGF-induced signaling in endothelial cells. Upon ligand binding, VEGFR2 undergoes autophosphorylation and becomes activated (1). Major autophosphorylation sites of VEGFR2 are located in the kinase 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 γ , 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 Monoclonal Antibody detects endogenous levels of VEGF receptor 2 protein. This antibody does not cross-react with other family members.

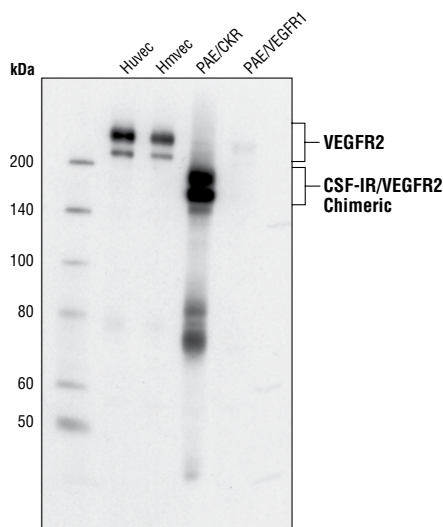
Source/Purification: Monoclonal antibody is produced by immunizing animals with a recombinant protein containing the carboxy-terminal 150 amino acid residues of human VEGF receptor 2.

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.



Immunohistochemical analysis of paraffin-embedded human astrocytoma using VEGF Receptor 2 (55B11) Rabbit mAb.



Western blot analysis of extracts from various cell lines and primary cell cultures, using VEGF Receptor 2 (55B11) Rabbit mAb. PAE/CKR cells overexpress chimeric receptors containing human CSF-1 extracellular binding domain/mouse VEGF receptor 2 intracellular domains (Rahimi, N. et al. [2000] *J. Biol. Chem.* 275, 16986-16992). PAE/VEGFR1 cells overexpress human VEGF receptor 1.

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

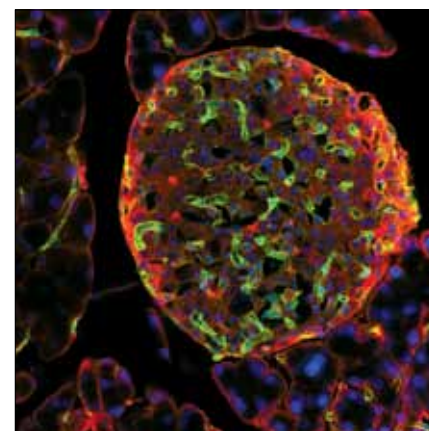
*Species cross-reactivity is determined by western blot.

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

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100
Immunohistochemistry (Paraffin)	1:600†
Unmasking buffer:	EDTA
Antibody diluent:	TBST-5%NGS
Detection reagent: SignalStain® Boost (HRP, Rabbit) #8114	
†Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.	
Immunofluorescence (IF-IC)	1:200
Immunofluorescence (IF-F)	1:200

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com



Confocal immunofluorescent analysis of mouse pancreas using VEGF Receptor 2 (55B11) Rabbit mAb (green) and S6 Ribosomal Protein (54D2) Mouse mAb #2317 (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

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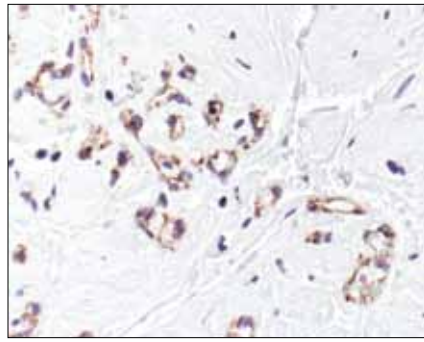
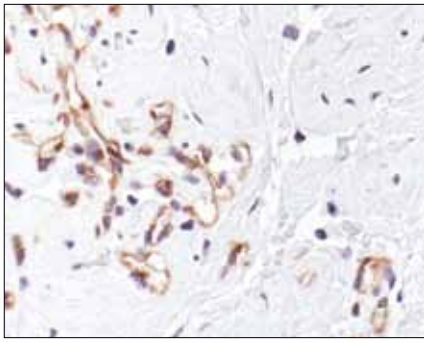
IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

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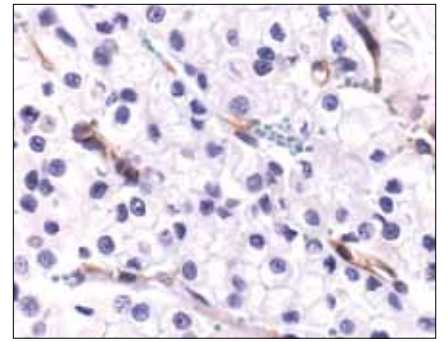


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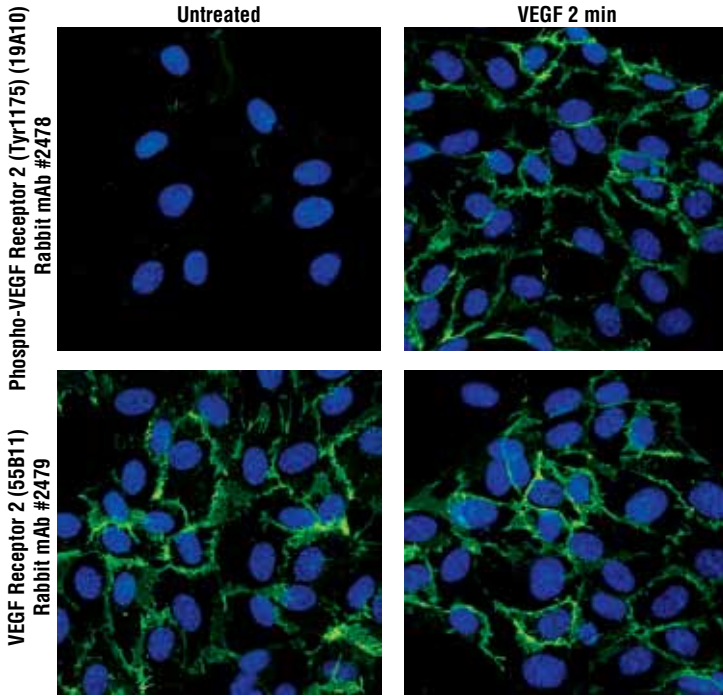
Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine 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.



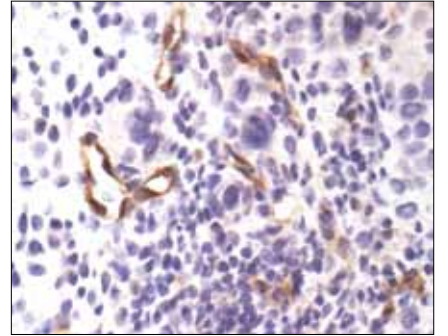
Immunohistochemical analysis of paraffin-embedded breast angiosarcoma, using VEGF Receptor 2 (55B11) Rabbit mAb (left). A serial section is stained for CD31 (PECAM-1), an endothelial cell marker (right).



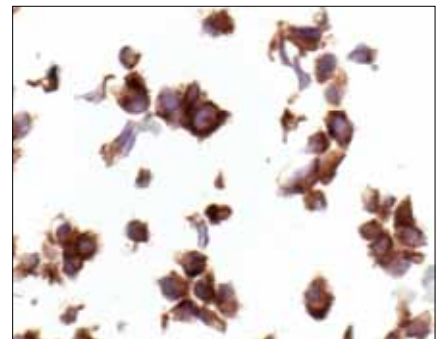
Immunohistochemical analysis of paraffin-embedded human renal adenocarcinoma, using VEGF Receptor 2 (55B11) Rabbit mAb.



Confocal immunofluorescent images of HUVEC cells untreated (left) or stimulated with Vascular Endothelial Growth Factor (VEGF) #9943 (right) and labeled with Phospho-VEGF Receptor 2 (Tyr1175) (19A10) Rabbit mAb #2478 (top, green) and VEGF Receptor 2 (55B11) Rabbit mAb (bottom, green). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).



Immunohistochemical analysis of paraffin-embedded HT-29 xenograft, using VEGF Receptor 2 (55B11) Rabbit mAb. Note staining of mouse blood vessels.



Immunohistochemical analysis of paraffin-embedded HUVEC cells using VEGF Receptor 2 (55B11) Rabbit mAb.

