

#2479 Store at -20°C

VEGF Receptor 2 (55B11) Rabbit mAb

- Small 100 µl (10 Western mini-blot)
- Large 300 µl (30 Western mini-blot)



Orders ■ 877-616-CELL (2355)
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rev. 06/03/09

This product is for *in vitro* research use only and is not intended for use in humans or animals. This product is not intended for use as a therapeutic or in diagnostic procedures.

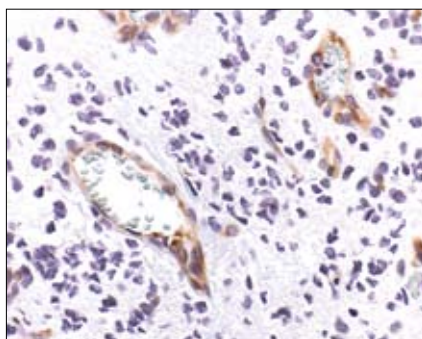
Entrez-Gene ID #3791
Swiss-Prot Acc. #P35968

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

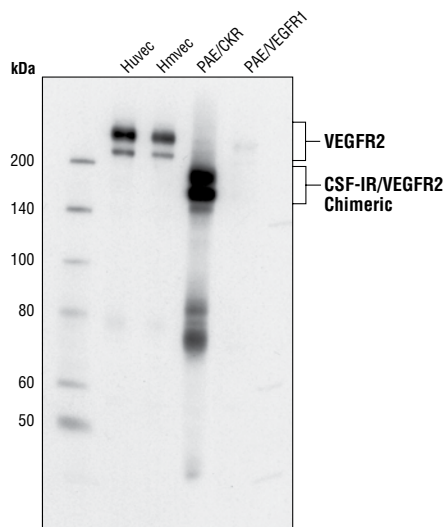
Background: Vascular endothelial growth factor receptor 2 (VEGFR-2, KDR, Flk-1) is a major receptor transducing VEGF-induced signaling in endothelial cells. Upon ligand binding, VEGFR-2 undergoes autophosphorylation and becomes activated (1). Major autophosphorylation sites of VEGFR-2 are located in 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 PLC-γ, as well as Shb (5,6). Signaling from VEGFR-2 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* (4).

Specificity/Sensitivity: VEGF Receptor 2 (55B11) Rabbit mAb 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.



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)	1:300
IHC protocol: Unmasking buffer/Antibody diluent EDTA/TBST-5%NGS	
Immunofluorescence (IF-IC)	1:100
Immunofluorescence (IF-F)	1:100
Flow Cytometry	1:200

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

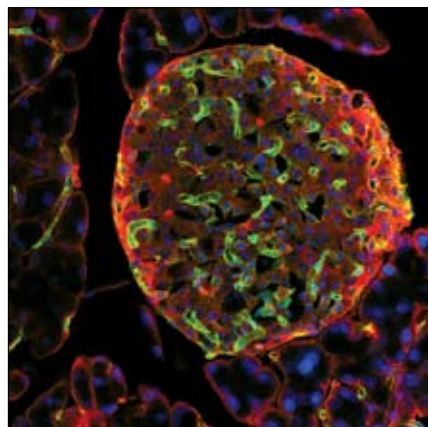
Please visit www.cellsignal.com for a complete listing of recommended companion products.

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) Karkkainen, M.J. and Petrova, T. (2000) *Oncogene* 19, 5598-5605.
- (5) Rahimi, N. et al. (2000) *J. Biol. Chem.* 275, 16986-16992.
- (6) Claesson-Welsh, L. (2003) *Biochem. Soc. Transact.* 31, 20-24.

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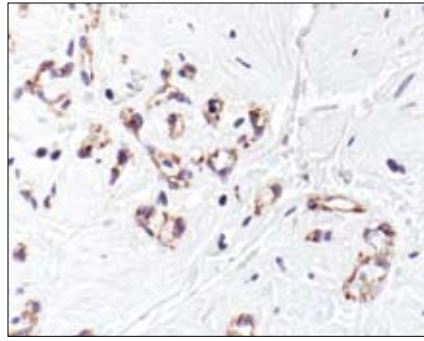
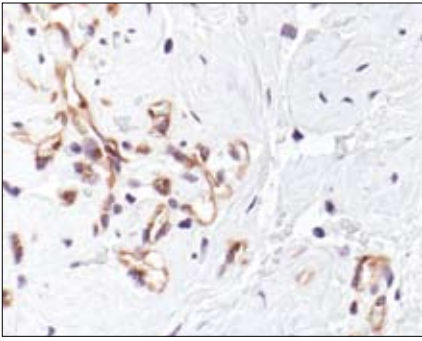
Confocal immunofluorescent analysis of mouse pancreas using VEGF Receptor 2 (55B11) Rabbit mAb (green) and S6 Ribosomal Protein (54D2) Mouse mAb #2317 (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

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

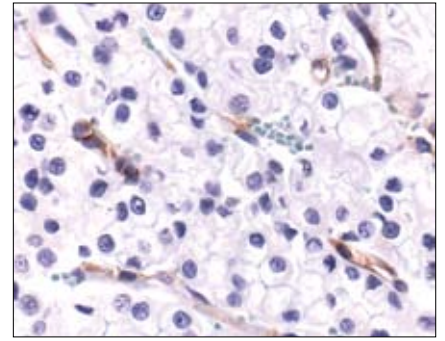
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

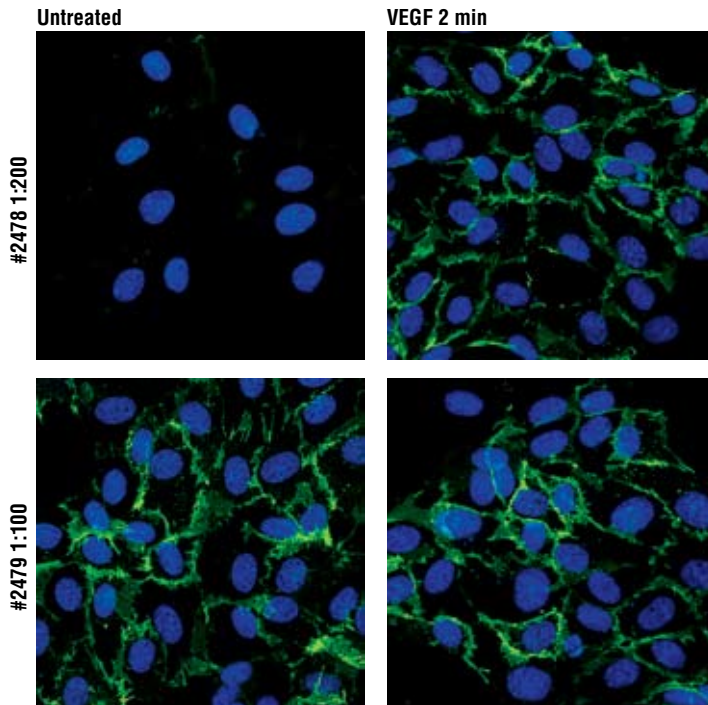
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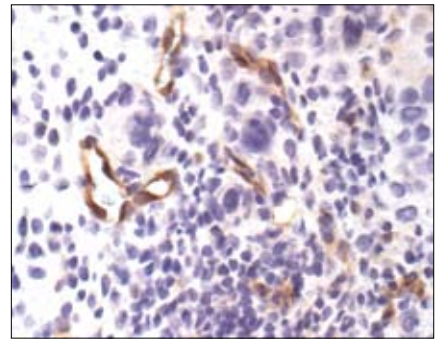
Immunohistochemical analysis of paraffin-embedded breast angiosarcoma, using VEGF Receptor 2 (55B11) Rabbit mAb (left). A serial section is stained for CD31 (PECAM-1), an endothelial cell marker (right).



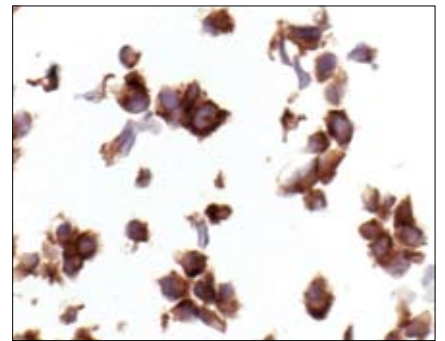
Immunohistochemical analysis of paraffin-embedded human renal adenocarcinoma, using VEGF Receptor 2 (55B11) Rabbit mAb.



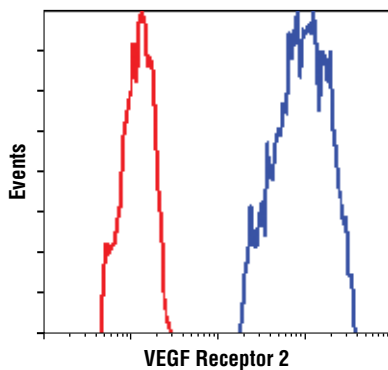
Confocal immunofluorescent images of HUVEC cells untreated (left) or stimulated with Vascular Endothelial Growth Factor (VEGF) #9943 (right) and labeled with Phospho-VEGF Receptor 2 (Tyr1175) (19A10) Rabbit mAb #2478 (top, green) and VEGF Receptor 2 (55B11) Rabbit mAb (bottom, green). Blue pseudocolor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



Flow cytometric analysis of CKR/PAE cells, using VEGF Receptor 2 (55B11) Rabbit mAb (blue) compared to a nonspecific negative control antibody (red).