



Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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#3770

Phospho-VEGF Receptor 2 (Tyr1175) (D5B11) Rabbit mAb

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP	Reactivity: H M	Sensitivity: Endogenous	MW (kDa): 230	Source/Isotype: Rabbit IgG	UniProt ID: #P35968	Entrez-Gene Id: 3791
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Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:100

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.

Specificity/Sensitivity

Phospho-VEGF Receptor 2 (Tyr1175) (D5B11) Rabbit mAb detects endogenous levels of VEGF receptor 2 protein only when phosphorylated at Tyr1175. This antibody may cross-react with other tyrosine-phosphorylated receptor tyrosine kinases, including FLT3.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr1175 of human VEGF receptor 2.

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).

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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse

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