
anti-VEGFR2 (Flk-1)

Cat #: HM1394
Rabbit polyclonal IgG
0.2 µg/µl, store at 4 °C

For research use only

BACKGROUND

VEGF receptor 2 (Flk-1) is a member of a receptor tyrosine kinase family whose activation plays an essential role in a large number of biological processes such as embryonic development, wound healing, cell proliferation, migration and differentiation. This family of receptor tyrosine kinases are characterized by the presence of seven immunoglobulin-like sequences in their extracellular domain. These receptors exhibit high degrees of relatedness to each other as well as lesser degrees of relatedness to the class III receptors including CSF-1/Fms, PDGR, SLFR/Kit and Flt-3/Flk-2. Like other growth factor receptors, upon ligand binding VEGF receptor 2 dimerises and is autophosphorylated on multiple tyrosine residues. These sites can be involved in the regulation of kinase activity or serve as binding sites for SH2 and phosphotyrosine binding containing signaling proteins. Phosphorylation of Tyrosines 1054 and 1059 in the activation loop is required for activation of VEGF receptor 2 and its intrinsic tyrosine kinase activity.

SPECIFICITY

This antibody reacts specifically with Flk-1 of mouse, rat and human origin by Western blotting, immunoprecipitation and immunohistochemistry.

Molecular Weight of Flk-1: 195 and 235 kDa. Western blotting positive controls: mouse liver

IMMUNOGEN

A peptide corresponding to amino acids 931-997 of mouse Flk-1.

STORAGE

This antibody is stable for 12 months when stored at 2-8°C.

REFERENCES

1. Millauer, B., Witzmann-Voos, S., Schnürch, H., Martinez, R., Moller, N.P.H., Risau, W., and Ullrich, A. 1993. High affinity VEGF binding and developmental expression suggest Flk-1 as a major regulator of vasculogenesis and angiogenesis. *Cell* 72: 835-846.
2. Oelrichs, R.B., Reid, H.H., Bernard, O., Ziemiecki, A., and Wilks, A.F. 1993. NYK/FLK-1: a putative receptor protein tyrosine kinase isolated from E10 embryonic neuroepithelium is expressed in endothelial cells of the developing embryo. *Oncogene* 8: 11-18.
3. Galland, F., Karamysheva, A., Pebusque, M., Borg, J., Rottapel, R., Dubreuil, P., Rosnet, O., and Birnbaum, D. 1993. The FLT4 gene encodes a transmembrane tyrosine kinase related to the vascular endothelial growth factor receptor. *Oncogene* 8: 1233-1240.
4. Achen, M.G., Jeltsch, M., Kukk, E., Makinen, T., Vitali, A., Wilks, A.F., Alitalo, K. and Stacker, S.A. (1998) Vascular endothelial growth factor D (VEGF-D) is a ligand for the tyrosine kinases VEGF receptor 2 (Flk1) and VEGF receptor 3 (Flt4). *Proc. Natl. Acad. Sci. U.S.A.* 95, 548-553.
5. Lamalice, L., Houle, F., Jourdan, G. and Huot, J. (2004) Phosphorylation of tyrosine 1214 on VEGFR2 is required for VEGF-induced activation of Cdc42 upstream of SAPK2/p38. *Oncogene* 23, 434-445.
6. Le Boeuf, F., Houle, F. and Huot, J. (2004) Regulation of vascular endothelial growth factor receptor 2-mediated phosphorylation of focal adhesion kinase by heat shock protein 90 and Src kinase activities. *J. Biol. Chem.* 279, 39175-39185.
7. Gallicchio, M., Mitola, S., Valdembrì, D., Fantozzi, R., Varnum, B., Avanzi, G.C. and Bussolino, F. (2005) Inhibition of vascular endothelial growth factor receptor 2-mediated endothelial cell activation by Axl tyrosine kinase receptor. *Blood* 105, 1970-1976.

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