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Product Information

Anti-phospho-VEGF R2 (pTyr^{1054})
produced in rabbit, affinity isolated antibody

Catalog Number **V5014**

Product Description

Anti-phospho-VEGF R2 (pTyr^{1054}) is produced in rabbit using a synthetic phosphopeptide derived from the region of human VEGF R2 that contains tyrosine 1054 as immunogen. The sequence is conserved in mouse and rat. The antiserum is affinity purified using epitope-specific affinity chromatography. The antibody is preadsorbed to remove any reactivity toward a non-phosphorylated peptide.

The antibody detects mouse VEGF R2. It has been used in immunoblotting applications. Human and rat (100% homologous) VEGF R2 have not been tested, but are expected to react. VEGF R3 (100% homologous) has not been tested, but is expected to react.

Vascular endothelial growth factor receptor 2 (VEGF R2, also known as KDR/FLK-1) is a 200 kDa 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.

Upon ligand binding, VEGFR2 dimerizes and is autophosphorylated on multiple tyrosine residues. These phosphotyrosine sites are involved in regulation of intrinsic tyrosine kinase activity or serve as binding sites for SH2 domains and phosphotyrosine binding (PTB) domains of downstream signaling proteins. Phosphorylation of tyrosines 1054 and 1059 in the activation loop is required for activation of VEGF R2 and its intrinsic tyrosine kinase activity.

Reagent

The antibody is supplied as a solution in Dulbecco's phosphate buffered saline (without Mg^{2+} and Ca^{2+}), pH 7.3, with 1.0 mg/ml BSA (IgG and protease free) and 0.05% sodium azide

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at –70 °C. Upon initial thawing, freeze the solution in working aliquots for extended storage. Avoid repeated freezing and thawing to prevent denaturing the antibody. Do not store in frost-free freezers. Working dilution samples should be discarded if not used within 12 hours. The antibody is stable for at least 12 months when stored appropriately.

Product Profile

One vial is sufficient for 10 immunoblots

A recommended working concentration of 0.35-1.0 μg/mL is determined by immunoblotting using NIH3T3 cells transfected with full-length, wild type VEGFR2 or porcine aortic endothelial (PAE) cells transfected with a chimeric receptor consisting of the extracellular portion of the CSF-1 receptor fused with the transmembrane and intracellular domains of mouse VEGF R2.

Note: In order to obtain the best results in various techniques and preparations, we recommend determining optimal working concentration by titration.

References

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2. Rahimi, N., et al., Receptor chimeras indicate that the vascular endothelial growth factor receptor-1 (VEGFR-1) modulates mitogenic activity of VEGFR-2 in endothelial cells., *J. Biol. Chem.*, **275**, 16986-16992 (2000).

3. Shalaby, F., et al., Failure of blood-island formation and vasculogenesis in Flk-1-deficient mice., *Nature*, **376**, 62-66 (1995).

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