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VEGFR2 [pY1214] Polyclonal Antibody, Rabbit

Store at –80°C

Catalog Number: 44-1052

Pub. No. MAN0005385 **Rev.** 1.00

Clonality: Polyclonal	**Quantity**: 10 mini-blot size	**Volume**: See product label
Host/Class: Rabbit IgG	**Reactivity**: Human VEGFR2 [pY1214]	**Predicted Reactivity**: Human, Mouse, Rat

Product description

VEGFR2 (vascular endothelial growth factor receptor 2) is a receptor tyrosine kinase which plays an essential role in embryonic development, wound healing, cell proliferation, migration, and differentiation. VEGFR2 dimerizes and is autophosphorylated on multiple tyrosine residues upon ligand binding. 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 tyrosine 1214 is reported to play a critical role in regulation of receptor autophosphorylation and stimulation of intrinsic tyrosine kinase catalytic activity.

Product specifications

Immunogen:	A chemically synthesized phosphopeptide derived from a region of human VEGFR2 containing tyrosine 1214
Purification:	Antibody negatively preadsorbed using a non-phosphopeptide then purified by epitope-specific affinity chromatography
Alternate Names:	KDR/FLK-1
Apparent MW:	~200 kDa
Sequence Identity:	Human
Sequence Homology:	Rat, Mouse
Lot:	See product label

Product applications

The antibody has been used in western blotting (0.35–1 µg/mL). Other applications may work but have not been tested.

Because conditions may vary, it is recommended that each investigator determine the optimal amount of antibody to be used for each application.

Storage and handling

Store the antibody at –80°C. Upon initial thawing, apportion into working aliquots and store at –80°C. Avoid repeated freezing and thawing.

Stability

When stored as instructed, expires one year from date of receipt unless otherwise indicated on the Certificate of Analysis.

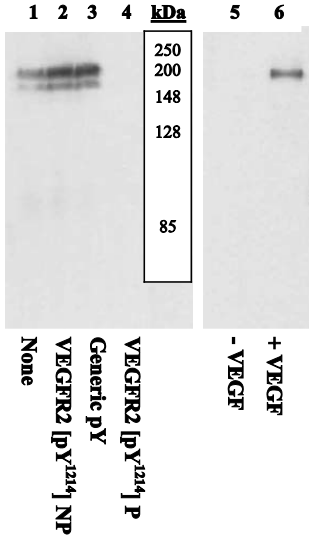

Figure 1 Peptide Competition and Stimulation.

Extracts of PAE cells transfected with a chimeric CSF-1/ VEGFR2 receptor stimulated with CSF-1 (lanes 1–4, 6), or unstimulated (lane 5) were resolved on a 10% polyacrylamide gel and transferred to PVDF. The membrane was blocked with 5% BSA-TBST overnight at 4°C then incubated with 0.50 µg/mL of the VEGFR2 [pY1214] antibody for 2 hours at room temperature in 3% BSA-TBST following prior incubation with: no peptide (lanes 1, 5, and 6), the non-phosphopeptide corresponding to the phosphopeptide immunogen (lane 2), a generic phosphotyrosine-containing peptide (lane 3), or the phosphopeptide immunogen (lane 4). The blots were developed using chemiluminescence (ECL) method with a goat F(ab')2 anti-rabbit IgG AP conjugate (Cat. no. ALI4405).

Only the phosphopeptide corresponding to VEGFR2 [pY1214] (lane 4) blocks the antibody signal, demonstrating the specificity of the antibody. The data also show that phosphorylation of the chimeric receptor is induced by the addition of CSF-1 (lanes 5, 6).

Positive controls used

293T cells transfected with full length VEGFR2 and treated with 10 ng/mL VEGF for 5 minutes, or porcine aortic endothelial (PAE) cells transfected with a chimeric receptor consisting of the extracellular domain of the CSF-1 receptor coupled to the transmembrane and cytoplasmic domains of the mouse VEGFR2.

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Storage buffer

Dulbecco's phosphate buffered saline (without Mg^{2+} and Ca^{2+}), pH 7.3 (+/– 0.1) with 1.0 mg/mL BSA (IgG, protease free) as a carrier, and 0.05% sodium azide.

CAUTION! Sodium azide is extremely toxic and may react with lead and copper plumbing to form highly explosive metal azides. Properly dispose of solutions containing sodium azide. Read the Safety Data Sheet (SDS) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. SDSs are available at **www.lifetechnologies.com/support**.

References

1. Meyer, R.D., et al. (2002) The presence of a single tyrosine residue at the carboxyl domain of vascular endothelial growth factor receptor-2/FLK-1 regulates its autophosphorylation and activation of signaling molecules. *J. Biol. Chem*. 277(30):27081-27087.
2. Habeck, H., et al. (2002) Analysis of a zebrafish VEGF receptor mutant reveals specific disruption of angiogenesis. *Curr. Biol*. 12(16):1405-1412.
3. Rahimi, N., et al. (2000) 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(22):16986-16992.
4. Shalaby, F., et al. (1995) Failure of blood-island formation and vasculogenesis in Flk-1-deficient mice. *Nature*. 376(6535):62-66.

Related products

Product Name	Quantity	Cat. No.
VEGFR2 [pY1054] Rabbit Polyclonal Antibody	10 blots	44-1046
EGFR Rabbit Polyclonal Antibody	7 vials	44-799G

Product documentation

To obtain a Certificate of Analysis or Safety Data Sheets (SDSs), visit **www.lifetechnologies.com/support.**

Important licensing information

This product may be covered by one or more Limited Use Label Licenses. By use of this product, you accept the terms and conditions of all applicable Limited Use Label Licenses.

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Explanation of symbols

Symbol	Description	Symbol	Description	Symbol	Description
	Manufacturer	REF	Catalog number	LOT	Batch code
	Use by		Temperature limitation		
	Consult instructions for use		Caution, consult accompanying documents		

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