



Qty: 100 µg/400 µl

Rabbit anti-VEGF Receptor-2

For Research Use Only

Catalog No. 36-0900

Lot No. See product label

Rabbit anti- VEGF Receptor-2

FORM

This polyclonal antibody is supplied as a 400 µl aliquot at a concentration of 0.25 mg/ml in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. The antibody is epitope-affinity-purified from rabbit antiserum.

PAD: ZMD.262

IMMUNOGEN

Synthetic peptide derived from the N-terminal region of the mouse vascular endothelial growth factor receptor-2 (VEGFR-2, FLK-1, KDR) protein.

SPECIFICITY

This antibody reacts with mouse VEGF Receptor-2. This antibody identifies the ~230 kDa mature form of VEGFR-2.

REACTIVITY

Reactivity is confirmed with mouse SVEC 4-10 cell lysates. Human reactivity is expected based on sequence homology.

Sample	Western Blotting	ELISA
Mouse	+++	ND
Immunogen	N/A	+++

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

ELISA: 0.1-1.0 µg/ml
Western Blotting: 1-5 µg/ml

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

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BACKGROUND

Vascular endothelial growth factor receptor-2 (VEGFR-2), also known as fetal liver kinase 1 (FLK-1) in mouse and KDR in human, is a transmembrane tyrosine kinase that plays an important role in the development of the vascular system and the vascularization of a wide variety of tumors.^{1,2,3} Binding of VEGF to VEGFR-2 leads to tyrosine phosphorylation of the dimerized receptor and subsequent phosphorylation of SH₂-containing intracellular signaling proteins, including phospholipase C, Src family tyrosine kinase and phosphatidylinositol 3-kinase (PI3K) adaptor molecules, SHC, NCK, and Ras GTPase-activating protein.⁴ VEGFR-2 is expressed in cultured human umbilical vein endothelial cells (HUVEC),⁷ HeLa cells, WM 35 melanoma cells, WM 9 melanoma cells,⁶ as well as mouse NIH3T3, and Balb/c 3T3 cells.⁵

In a single study of 115 paraffin-embedded cancer specimens analyzed by immunohistochemistry, VEGFR-2 expression was observed in bladder tumors, breast cancer, intestinal cancer and lung cancer, suggesting a direct role for VEGF as an autocrine growth factor in a variety of human cancers.⁸

REFERENCES

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3. Heidenreich R, et al. *Cancer Res* 60(21):6142-6147, 2000.
4. Dayanir V, et al. *J Biol Chem* 276(21):17-686-17692, 2001.
5. Soker S, et al. *J Biol Chem* 271(10):5761-5767, 1996.
6. Terman B, et al. *Growth Factors* 11(3):187-195, 1994.
7. Waltenberger J, et al. *J Biol Chem* 275(21):15905-15911, 2000.
8. Tian X, et al. *Biochem Biophys Res Commun* 286(3):505-512, 2001.

RELATED PRODUCTS

Product	Clone/PAD*	Cat. No.
Rabbit anti VEGF	Z-CVF3	18-0254
Rabbit anti VEGF-C	Z-CVC7	18-2255
Rabbit anti VEGF Receptor-1 (Soluble)	ZMD.263	36-1100
Mouse anti VEGF	VG1	18-7328
Rabbit anti VEGFR-3 (Mid)	ZMD.250	36-0100
Rabbit anti VEGFR-3 (C-term)	ZMD.251	36-0200
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

*PAD: Polyclonal Antibody Designation

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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