



Qty: 100 µg/400 µl

Rabbit anti-VEGF Receptor-1 (Soluble)

For Research Use Only

Catalog No. 36-1100

Lot No. See product label

Rabbit anti-VEGF Receptor-1 (Soluble)

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.263

IMMUNOGEN

Synthetic peptide derived from the C-terminal region of the soluble form of the human VEGF Receptor-1 (sVEGFR-1, sFlt-1) protein.

SPECIFICITY

This antibody is specific for the soluble form of human VEGF Receptor-1. In Western blots, this antibody identifies a single band at ~130 kDa as well as a few bands at lower molecular weights.

REACTIVITY

Reactivity has been confirmed with human SW480 colorectal adenocarcinoma cell lysates.

Sample	Western Blotting	ELISA
Human	++	ND
Mouse	ND	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: 0.5 - 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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PI361100

(Rev 10/08) DCC-08-1089

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BACKGROUND

Angiogenesis, the formation of new blood vessels, is regulated by the balance between positive and negative endothelial regulatory factors. Vascular endothelial factor receptor-1 (VEGFR-1), also known as FMS-like tyrosine kinase 1 (Flt-1), is a transmembrane receptor tyrosine kinase with high affinity for vascular endothelial growth factor (VEGF) and placenta growth factor (PIGF).¹⁻³ Binding of VEGF to VEGFR-1 produces receptor dimerization and subsequent signal transduction. Full-length VEGFR-1 is characterized by the presence of seven extracellular immunoglobulin-like domains containing the ligand-binding region, a single short transmembrane sequence, and an intracellular region with a tyrosine kinase domain.² VEGF receptors are expressed by vascular endothelial cells and peripheral blood monocytes,⁴ and have also been observed in colon carcinoma cell lines and colorectal cancer liver metastases.⁵

In addition to the full-length form of the receptor, a soluble form (sVEGFR-1 or sFlt-1) is generated by alternative splicing of *Flt-1* mRNA. This naturally occurring, soluble form of VEGFR-1 is truncated on the C-terminal side of the sixth extracellular Ig-like domain,⁶ and has been described in various locations, including the serum and plasma of normal males and females, the serum of pregnant women, placenta, and breast tumor tissues.^{7,8}

Soluble VEGFR-1 is an antagonist of VEGF action and an inhibitor of the VEGF signaling pathway, which has been characterized as one of the most important endothelial regulators in human tumor angiogenesis. In Western blots, the molecular weight of sVEGFR-1 has been reported at ~110 kDa in HUVEC or MVEC cells, and at ~120-130 kDa in COLO-800 cells.⁹

REFERENCES

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4. Sawano A, et al. *Blood* 97(3):785-791, 2001.
5. Warren RS, et al. *J Clin Invest* 95(4):1789-1797, 1995.
6. Kendall R, Thomas KA. *PNAS* 90:10705-10709, 1993.
7. Barleon B, et al. *Angiogenesis* 4(2):143-154, 2001.
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9. Hornig C, et al. *Lab Invest* 80(4):443-454, 2000.

RELATED PRODUCTS

Product	Clone/PAD*	Cat. No.
Rabbit anti-VEGF Receptor-2	ZMD.262	36-0900
Rabbit anti-VEGF	Z-CVF3	18-0254
Mouse anti-VEGF	VG1	18-7328
Rabbit anti-VEGF Receptor-3 (Mid)	ZMD.250	36-0100
Rabbit anti-VEGF Receptor-3 (C-term)	ZMD.251	36-0200
Rabbit anti-VEGF-C	Z-CVC7	18-2255
Rabbit anti-VEGF-C (Mature)	ZMD.181	34-5500
Rabbit anti-VEGF-C (Propeptide)	ZMD.83	34-4300
Rabbit anti-VEGF	ZMD.58	34-3900

*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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