

#2463 Store at -20°C

VEGF-B Antibody



✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #7423
Swiss-Prot Acc. #P49765

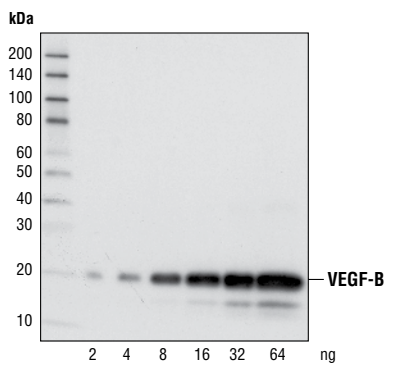
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W	H	20 kDa	Rabbit**
Recombinant			

Background: Vascular endothelial growth factor (VEGF) is a highly specific mitogen for vascular endothelial cells. VEGF and its close relatives VEGF-B, -C and -D form a sub-family within PDGF family of growth factors, which belongs to the cysteine knot class of cytokines. Five VEGF isoforms of 121, 145, 165, 189 and 206 amino acids (VEGF121–206) are generated as a result of alternative splicing from a single VEGF gene (1).

The various VEGF forms bind to three tyrosine-kinase receptors, VEGFR-1, VEGFR-2 and VEGFR-3 which are expressed almost exclusively in endothelial cells. VEGFR-2 is the main angiogenic signal transducer for VEGF, while VEGFR-3 is specific for VEGF-C and -D and is necessary and sufficient for lymphangiogenic signaling. However, upon proteolytic processing VEGF-C and -D gain the ability to also bind and activate VEGFR-2 (2). Guided by the binding properties of the ligands, the VEGFRs are able to form both homodimers and heterodimers. Receptor dimerization is accompanied by activation of receptor kinase activity leading to receptor autophosphorylation. Phosphorylated receptors recruit interacting proteins and induce downstream signaling (3). Recently, tumor therapies based on neutralizing anti-VEGF antibodies and small molecule tyrosine kinase inhibitors targeting VEGFRs have been developed. These new strategies for tumor treatment show the clinical relevance of inhibiting VEGF signal transduction pathways that are exaggerated in pathological angiogenesis (4).

Specificity/Sensitivity: VEGF-B Antibody detects recombinant human VEGF-B protein at various concentrations. This antibody does not cross-react with other VEGF family members.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly155 of human VEGF-B. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of recombinant human VEGF-B proteins at various concentrations, using VEGF-B Antibody.

Background References:

- (1) Olsson, A.K. et al. (2006) *Nat. Rev. Mol. Cell Biol.* 7, 359–371.
- (2) Gluzman-Poltorak, Z. et al. (2001) *J. Biol. Chem.* 276, 18688–18694.
- (3) Matsumoto, T. and Mughishima, H. (2006) *J. Atheroscler. Thromb.* 13, 130–135.
- (4) Gatto, B. and Cavalli, M. (2006) *Anticancer Agents Med. Chem.* 6, 287–301.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignaling.com.

Please visit www.cellsignaling.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.