

Recombinant Human VEGF-B₁₆₇ (carrier-free)

Catalog# / Size	783902 / 10 µg 783904 / 25 µg 783906 / 100 µg
Regulatory Status	RUO
Other Names	Vascular endothelial growth factor B, VRF, VEGF-B, VEGF-B167
Description	Vascular endothelial growth factor B (VEGF-B) is a member of the VEGF family of growth factors that are important regulators of angiogenesis, vasculogenesis, and lymphangiogenesis. VEGF-B is a disulfide-linked dimeric protein that exists as two isoforms, VEGF-B167 and VEGF-B186, by alternate splicing. VEGF-B167 binds strongly to heparan sulfate in the pericellular matrix due to a highly basic cysteine-rich heparin binding carboxy terminus, whereas VEGF-B186 is a secreted soluble form. Both isoforms are expressed in most tissues concomitantly and bind to VEGF-R1 as well as to NRP-1, but they do not bind VEGF-R2 and VEGF-R3. VEGF-B deficient mice are viable without any phenotype indicating that VEGF-B is redundant in angiogenesis in developing embryos and healthy adults. The ability of VEGF-B to induce angiogenesis in most tissues is weak and maybe restricted to the ischemic heart. VEGF-B has been detected in a wide range of tumours, but its' role in tumour growth remains controversial. VEGF-B is also expressed in the central nervous system and may have a role in neuroprotection. VEGF-B deficient mice showed impaired recovery from cerebral ischemic injury and administration of VEGF-B stimulated neurogenesis in adult mice.

Product Details

Source	Human VEGF-B ₁₆₇ , amino acids Pro22-Arg188 (Accession # P49765) was expressed in <i>E.coli</i> .
Molecular Mass	The 167 amino acid recombinant protein has a predicted molecular mass of approximately 19 kD. The DTT-reduced protein migrates at approximately 24 kD and non-reduced protein migrate at approximately 48 kD by SDS-PAGE. The predicted N-terminal amino acid is Pro.
Purity	>95%, as determined by Coomassie stained SDS-PAGE.
Formulation	0.22 µm filtered protein solution is in 35% Acetonitrile, 0.1% TFA
Endotoxin Level	Less than 0.1 EU per µg protein as determined by the LAL method.
Concentration	10 and 25 µg sizes are bottled at 200 µg/mL. 100 µg and larger sizes are lot-specific and bottled at the concentration indicated on the vial. To obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.
Storage & Handling	Unopened vial can be stored between 2°C and 8°C for up to 2 weeks, at -20°C for up to six months, or at -70°C or colder until the expiration date. For maximum results, quick spin vial prior to opening. The protein can be aliquoted and stored at -20°C or colder. Stock solutions can also be prepared at 50 - 100 µg/mL in appropriate sterile buffer, carrier protein such as 0.2 - 1% BSA or HSA can be added when preparing the stock solution. Aliquots can be stored between 2°C and 8°C for up to one week and stored at -20°C or colder for up to 3 months. Avoid repeated freeze/thaw cycles.
Activity	When human VEGF-B ₁₆₇ is immobilized at 0.5 µg/mL, human Neuropilin-1 (Cat. No. 768002) binds with an EC ₅₀ of 0.1 – 0.4 µg/mL in a functional ELISA.
Application	Bioassay
Application Notes	BioLegend carrier-free recombinant proteins provided in liquid format are shipped on blue ice. Our comparison testing data indicates that when handled and stored as recommended, the liquid format has equal or better stability and shelf-life compared to commercially available lyophilized proteins after reconstitution. Our liquid proteins are verified in-house to maintain activity after shipping on blue ice and are backed by our 100% satisfaction guarantee . If you have any concerns, contact us at tech@biolegend.com .

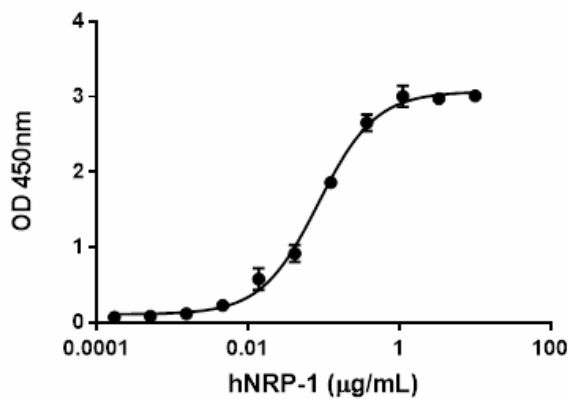
Antigen Details

Structure	Homodimer
Distribution	Expressed in most tissues including CNS
Function	Angiogenesis, neurogenesis
Interaction	Endothelial cells, CNS neurons
Ligand/Receptor	VEGF-R1, NRP-1 (CD304)
Bioactivity	Measured by its ability to bind human NRP-1
Cell Type	Embryonic Stem Cells, Endothelial cells, Mesenchymal Stem Cells, Neural Stem Cells
Biology Area	Angiogenesis, Cardiovascular Biology, Neuroscience, Stem Cells
Molecular Family	Growth Factors, Neurotrophic Factors
Antigen References	

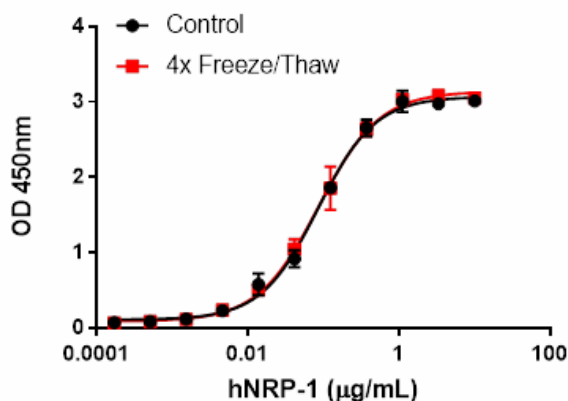
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Gene ID [7423](#)

Product Data



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Stability testing for Human VEGF-B₁₆₇. Human VEGF-B₁₆₇ was aliquoted in 35% Acetonitrile, 0.1% TFA at 0.2 mg/mL. One aliquot was frozen and thawed four times (4x Freeze/Thaw), and compared to a control kept at 4°C (Control). The samples were tested in a binding assay with human Neuropilin-1.

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