

VEGF121 Protein, Human (120 a.a)

Cat. No.:	HY-P7420
Synonyms:	VEGF-AA; rHuVEGF-121; VPF
Species:	Human
Source:	E. coli
Accession:	P15692-9 (P28-R147)
Gene ID:	7422
Molecular Weight:	Approximately 28.2 kDa (Disulfide-linked homodimer)

PROPERTIES

AA Sequence	<p>P M A E G G G Q N H H E V V K F M D V Y Q R S Y C H P I E T L V D I F Q E Y P D</p> <p>E I E Y I F K P S C V P L M R C G G C C N D E G L E C V P T E E S N I T M Q I M</p> <p>R I K P H Q G Q H I G E M S F L Q H N K C E C R P K K D R A R Q E K C D K P R R</p>
Biological Activity	<ol style="list-style-type: none"> The ED₅₀ is ≤7.474 ng/mL as measured by HUVEC cells, corresponding to a specific activity of >1.34 × 10⁵ units/mg. Immobilized Human VEGF 121 at 2 µg/mL (100 µl/well) can bind Human VEGFR2-Fc. The ED₅₀ of Human VEGFR2-Fc is ≤78 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against PBS.
Endotoxin Level	<0.2 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>VEGF-121 lacks heparin binding ability and requires cell-surface heparan sulfates for efficient binding to the VEGF receptors of human melanoma cells^[1]. In addition, VEGF-121 and VEGF 165 regulate blood vessel diameter through vascular endothelial growth factor receptor 2 in an in vitro angiogenesis model. VEGF-121 is predictor for survival in activated B-cell-like diffuse large B-cell lymphoma and is related to an immune response gene signature conserved in cancers^{[2][3]}. Furthermore, VEGF-121 plasma level is biomarker for response to anti-angiogenetic therapy in recurrent glioblastoma^[4].</p>
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REFERENCES

- [1]. Cohen T, et al. VEGF121, a vascular endothelial growth factor (VEGF) isoform lacking heparin binding ability, requires cell-surface heparan sulfates for efficient binding to the VEGF receptors of human melanoma cells. *J Biol Chem.* 1995 May 12;270(19):11322-6.
- [2]. Broséus J, et al. VEGF121, is predictor for survival in activated B-cell-like diffuse large B-cell lymphoma and is related to an immune response gene signature conserved in cancers. *Oncotarget.* 2017 Jul 19;8(53):90808-90824.
- [3]. Nakatsu MN, et al. VEGF(121) and VEGF(165) regulate blood vessel diameter through vascular endothelial growth factor receptor 2 in an in vitro angiogenesis model. *Lab Invest.* 2003 Dec;83(12):1873-85.
- [4]. Martini M, et al. VEGF-121 plasma level as biomarker for response to anti-angiogenic therapy in recurrent glioblastoma. *BMC Cancer.* 2018 May 10;18(1):553.
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Caution: Product has not been fully validated for medical applications. For research use only.

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