

VEGF-CC Protein, Human (116a.a, HEK293)

Cat. No.:	HY-P7313
Synonyms:	rHuVEGF-C; Vascular endothelial growth factor C; Flt4-L; VRP
Species:	Human
Source:	HEK293
Accession:	P49767 (A112-R227)
Gene ID:	7424
Molecular Weight:	16-19 kDa

PROPERTIES

AA Sequence	A H Y N T E I L K S I D N E W R K T Q C M P R E V C I D V G K E F G V A T N T F F K P P C V S V Y R C G G C C N S E G L Q C M N T S T S Y L S K T L F E I T V P L S Q G P K P V T I S F A N H T S C R C M S K L D V Y R Q V H S I I R R
Biological Activity	1. The ED ₅₀ is <0.5 µg/mL as measured by HMVEC human microvascular endothelial cells. 2. Measured in a cell proliferation assay using HUVEC human microvascular endothelial cells. The ED ₅₀ for this effect is ≤6.554 µg/mL, corresponding to a specific activity is ≥ 152.5 U/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized after extensive dialysis against PBS or 20 mM PB, 150 mM NaCl, pH 7.4.
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	The main function of VEGF-C is in lymphangiogenesis, where it acts on lymphatic endothelial cells (LECs) primarily via its receptor VEGFR-3 promoting survival, growth and migration ^[1] . However, in addition to its effect on lymphatic vessels, it can also promote the growth of blood vessels and regulate their permeability. The effect on blood vessels can be mediated via its primary receptor VEGFR-3 or its secondary receptor VEGFR-2 ^[2] . Apart from vascular targets, VEGF-C is also important for neural development and blood pressure regulation ^{[3][4]} .
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REFERENCES

- [1]. Joukov V, et al. A novel vascular endothelial growth factor, VEGF-C, is a ligand for the Flt4 (VEGFR-3) and KDR (VEGFR-2) receptor tyrosine kinases. EMBO J. 1996 Jan 15;15(2):290-98.
- [2]. Tammela T, et al. Blocking VEGFR-3 suppresses angiogenic sprouting and vascular network formation Nature. 2008 Jul 31;454(7204):656-60.
- [3]. Le Bras B, et al. VEGF-C is a trophic factor for neural progenitors in the vertebrate embryonic brain. Nat Neurosci. 2006 Mar;9(3):340-8.
- [4]. Machnik A, et al. Macrophages regulate salt-dependent volume and blood pressure by a vascular endothelial growth factor-C-dependent buffering mechanism. Nat Med. 2009 May;15(5):545-52.
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Caution: Product has not been fully validated for medical applications. For research use only.

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