

VEGF164 Protein, Rat (CHO)

Cat. No.:	HY-P7311
Synonyms:	rRtVEGF164; VEGF-AA; VPF
Species:	Rat
Source:	CHO
Accession:	P16612-2 (A27-R190)
Gene ID:	83785
Molecular Weight:	Approximately 35-48 kDa (Disulfide-linked homodimer) as determined by non-reducing SDS-PAGE; approximately 20-25 kDa as determined by reducing SDS-PAGE.

PROPERTIES

AA Sequence	<p>A P T T E G E Q K A H E V V K F M D V Y Q R S Y C R 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 A G C C N D E A L E C V P T S E S N V T M Q I M</p> <p>R I K P H Q S Q H I G E M S F L Q H S R C E C R P K K D R T K P E N H C E P C S</p> <p>E R R K H L F V Q D P Q T C K C S C K N T D S R C K A R Q L E L N E R T C R C D</p> <p>K P R R</p>
Biological Activity	The ED ₅₀ is <4 ng/mL as measured by HUVEC cells, corresponding to a specific activity of >2.5 × 10 ⁵ units/mg.
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	Vascular endothelial growth factor (VEGF or VEGFA) is a potent mediator of both angiogenesis and vasculogenesis in the fetus and adult. It is a member of the PDGF family that is characterized by the presence of eight conserved cysteine residues
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and a cystine knot structure^[1]. VEGF164 appears to be the most abundant and potent isoform, followed by VEGF121 and VEGF189^{[1][2]}. VEGF164 binds the semaphorin receptor, Neuropilin1 and promotes complex formation with VEGF R2^[3].

REFERENCES

- [1]. Robinson CJ, et al. The splice variants of vascular endothelial growth factor (VEGF) and their receptors. J Cell Sci. 2001 Mar;114(Pt 5):853-65.
- [2]. Byrne AM, et al. Angiogenic and cell survival functions of vascular endothelial growth factor (VEGF). J Cell Mol Med. 2005 Oct-Dec;9(4):777-94.
- [3]. Qi Pan, et al. Neuropilin-1 Binds to VEGF121 and Regulates Endothelial Cell Migration and Sprouting. The Journal of Biological Chemistry 282, 24049-24056.
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Caution: Product has not been fully validated for medical applications. For research use only.

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