

Animal-Free VEGF Protein, Pig (His)

Cat. No.:	HY-P72280AF
Synonyms:	VEGFA; VEGFVascular endothelial growth factor A; VEGF-A; Vascular permeability factor; VPF
Species:	Pig
Source:	E. coli
Accession:	P49151 (A27-R190)
Gene ID:	397157
Molecular Weight:	Approximately 20.16 kDa

PROPERTIES

AA Sequence	<p>M A P M A E G D Q K P 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</p> <p>D 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 F N I T M Q I</p> <p>M 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 N P C G P C</p> <p>S 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</p> <p>D K P R R</p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a solution containing 1X PBS, pH 8.0.
Endotoxin Level	<0.1 EU per 1 µg of the protein by the LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
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>The VEGF-A Protein, a versatile growth factor, plays a crucial role in angiogenesis, vasculogenesis, and endothelial cell growth. Its diverse effects include inducing endothelial cell proliferation, promoting cell migration, inhibiting apoptosis, and inducing permeabilization of blood vessels. VEGF-A achieves these functions by binding to receptors FLT1/VEGFR1 and KDR/VEGFR2, as well as heparan sulfate and heparin. Notably, its interaction with the NRP1 receptor initiates a signaling pathway essential for motor neuron axon guidance and cell body migration during embryonic development. Additionally, VEGF-A binds to the DEAR/FBXW7-AS1 receptor, further expanding its regulatory roles. Structurally, VEGF-A exists as a homodimer linked by disulfide bonds and can also form heterodimers with PGF. Interactions with NRP1 and BSG underscore the intricate molecular relationships that underlie the multifaceted functions of VEGF-A in orchestrating</p>
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vascular processes and embryonic development.

Caution: Product has not been fully validated for medical applications. For research use only.

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