

VEGF165 Protein, Human (Biotinylated, HEK293, Avi)

Cat. No.:	HY-P78813
Synonyms:	RP1-261G23.1; MGC70609; MVCD1; VEGFA; VPF
Species:	Human
Source:	HEK293
Accession:	NP_001165097 (A27-R191)
Gene ID:	7422
Molecular Weight:	25-30 kDa

PROPERTIES

Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Anti-VEGFA antibody at 5 µg/mL can bind Biotinylated Human VEGF165. The EC ₅₀ is 6.080-7.120 ng/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized a 0.22 µm filtered solution of PBS, 6% Trehalose, pH 7.4.
Endotoxin Level	<1 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.
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

VEGF165, a member of the PDGF/VEGF growth factor family, encodes a heparin-binding protein that forms a disulfide-linked homodimer. This growth factor plays a pivotal role in inducing proliferation and migration of vascular endothelial cells, crucial for both physiological and pathological angiogenesis. Disruption of the VEGF gene in mice resulted in aberrant embryonic blood vessel formation, underscoring its importance in vascular development. Elevated expression of VEGF is observed in various tumors, correlating with tumor stage and progression. Additionally, increased levels of VEGF are associated with conditions such as POEMS syndrome, microvascular complications of diabetes 1 (MVCD1), and atherosclerosis. Alternative splicing gives rise to different isoforms, including a C-terminally extended isoform with antiangiogenic properties. During infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), VEGF levels are heightened, contributing to inflammation by recruiting inflammatory cells and increasing the levels of angiopoietin II (Ang II), thereby establishing a feedback loop with Ang II to perpetuate the release of inflammatory cytokines. The broad expression of VEGF in tissues like the thyroid, prostate, and 21 other tissues emphasizes its widespread involvement in diverse physiological processes.

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

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