

PRODUCT INFORMATION

VEGF-A 165 variant (human, recombinant)

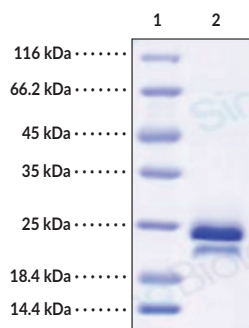
Item No. 42752

Overview and Properties

Synonyms:	Vascular Endothelial Growth Factor A 165 variant
Source:	Active recombinant human VEGF-A 165 variant expressed in HEK293 cells
Amino Acids:	27-191
Uniprot No.:	P15692
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥95% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile 20 mM tris, pH 8.0, and 150 mM sodium chloride
Endotoxin Testing:	<10 EU per mg protein
Protein	
Concentration:	<i>batch specific</i> mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: VEGF-A 165 variant

SDS-PAGE Analysis of VEGF-A 165 variant.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

VEGF-A is a member of the PDGF/VEGF family of growth factors that regulates the development, proliferation, and maintenance of the vascular system.¹ VEGF-A exists as a homodimer and is secreted by endothelial cells, as well as fibroblasts, smooth muscle cells, platelets, neutrophils, and macrophages.^{2,3} Alternative splicing of VEGFA pre-mRNA leads to the formation of eight isoforms, including the pro-angiogenic VEGF-A 165 variant (VEGF-165), which is the most abundant and biologically active form.^{4,5} VEGF-165 is composed of a signal peptide, a VEGFR1-binding domain, a VEGFR2-binding domain, a heparin-binding domain, and a C-terminal domain, which interacts with the extracellular matrix (ECM) and neuropilin (NRP).^{4,6} It is involved in embryonic development, wound healing, and neovascularization in diseases such as cancer.⁵ VEGF-165 induces angiogenesis in rabbit cornea, which can be reversed by the anti-angiogenic factor VEGF-165b.⁷ Serum levels of VEGF-165 are increased in patients with melanoma and positively correlated with metastasis.⁸ VEGF-165 levels are also increased in the serum, synovial fluid, and inflamed joints of patients with rheumatoid arthritis.⁹ Cayman's VEGF-A 165 variant (human, recombinant) protein can be used for binding assay and cell-based assay applications. This protein consists of 165 amino acids and a predicted N-terminus of Ala27 after signal peptide cleavage.

References

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