

**Features**

- Designed under ISO 9001:2015 and ISO 13485:2016
- Manufactured and QC tested under a GMP compliance factory
- Animal-Free materials
- Beta-lactam materials free
- Batch-to-batch consistency
- Stringent quality control tests

Source

GMP Human VEGF165 Protein(GMP-VE5H23) is expressed from human 293 cells (HEK293). It contains AA Ala 27 - Arg 191 (Accession # [P15692-4](#)).
Predicted N-terminus: Ala 27

Molecular Characterization

VEGF165(Ala 27 - Arg 191)
P15692-4

This protein carries no "tag".

The protein has a calculated MW of 19.2 kDa. The protein migrates as 24 kDa±3 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 10 EU/mg by the LAL method.

Host Cell Protein

<0.5 ng/μg of protein tested by ELISA.

Host Cell DNA

<0.02 ng/μg of protein tested by qPCR.

Sterility

The sterility testing was performed by membrane filtration method described in CP<1101>, USP<71> and Eur. Ph. 2.6.1.

Mycoplasma

Negative.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with protectants.

Contact us for customized product form or formulation.

Shipping

This product is supplied and shipped with blue ice, please inquire the shipping cost.

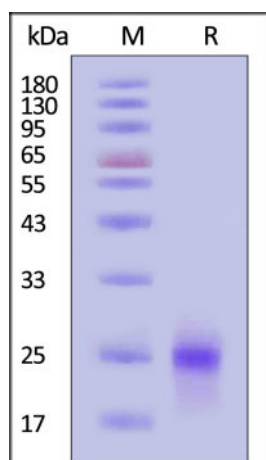
Storage

Upon receipt, store it immediately at -20°C or lower for long term storage.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 5 years in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution.

SDS-PAGE

Discounts, Gifts,
and more!

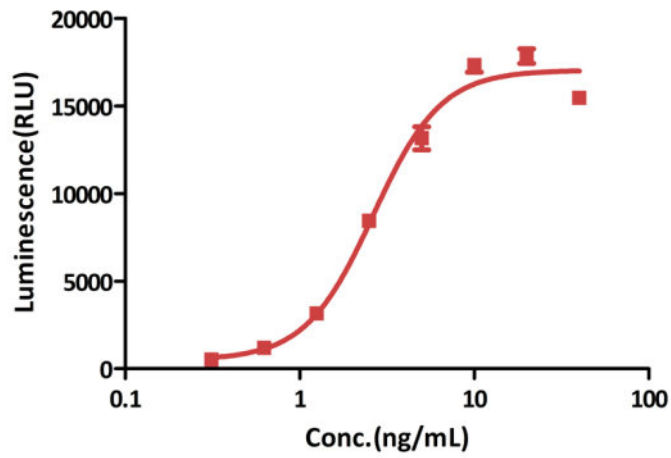




GMP Human VEGF165 Protein on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

Bioactivity-Bioactivity CELL BASE

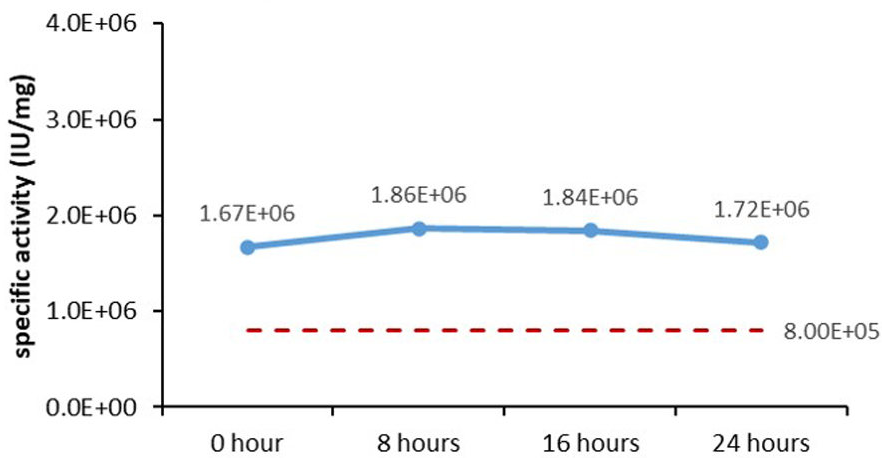
GMP Human VEGF165 Protein stimulates proliferation of 293F-NFAT/Luc-VEGFR2-3-7



GMP Human VEGF165 Protein (Cat. No. GMP-VE5H23) stimulates proliferation of 293F-NFAT/Luc-VEGFR2-3-7 cells. The specific activity of GMP Human VEGF165 Protein is $>8.00 \times 10^5$ IU/mg, which is calibrated against human vascular endothelial growth factor 165 WHO International Standard (NIBSC code: 02/286) (QC tested).

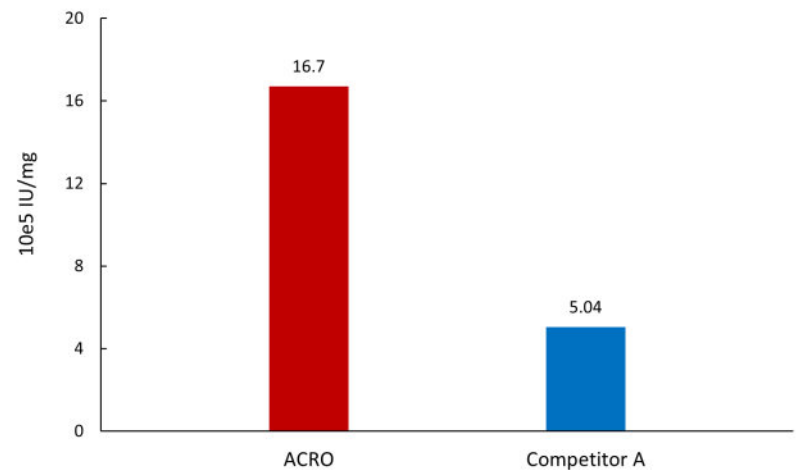
Bioactivity-Stability

37°C Accelerated Stability (Reconstituted protein)



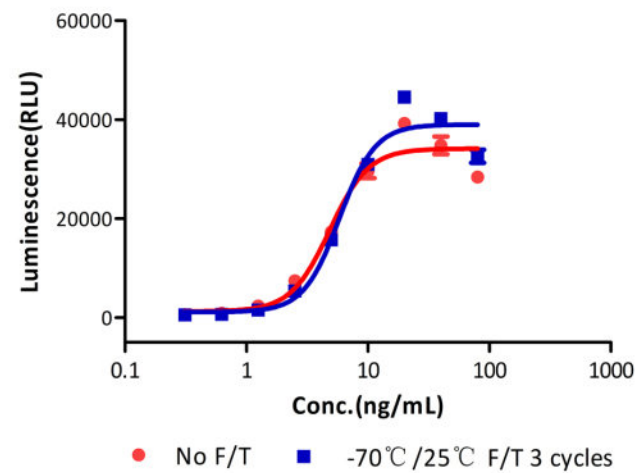
The Cell based assay shows that GMP Human VEGF165 Protein (Cat. No. GMP-VE5H23) is stable at 37°C for 24 hours.

GMP Human VEGF165 Protein stimulates proliferation of 293F-NFAT/Luc-VEGFR2-3-7 cells



The activity of GMP Human VEGF165 Protein (Cat. No. GMP-VE5H23) was higher than other competing products.

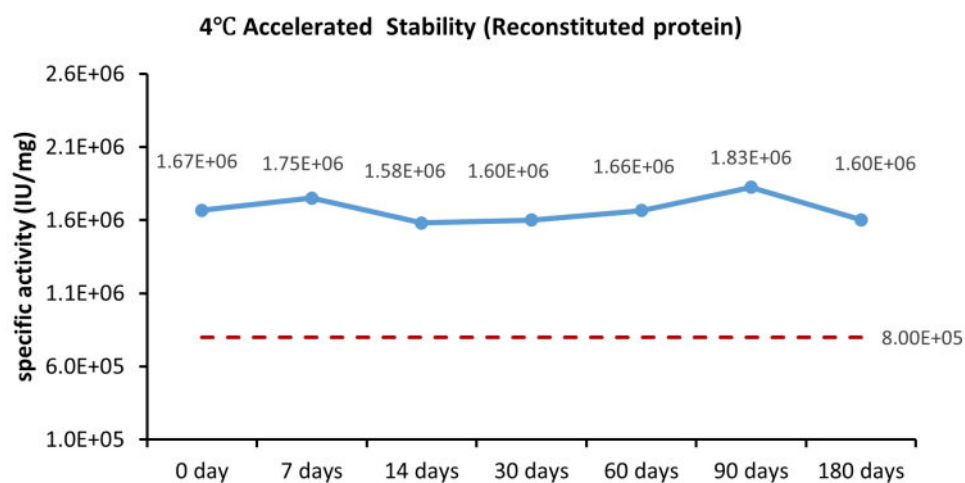
Freeze & Thaw stability (Reconstituted protein)



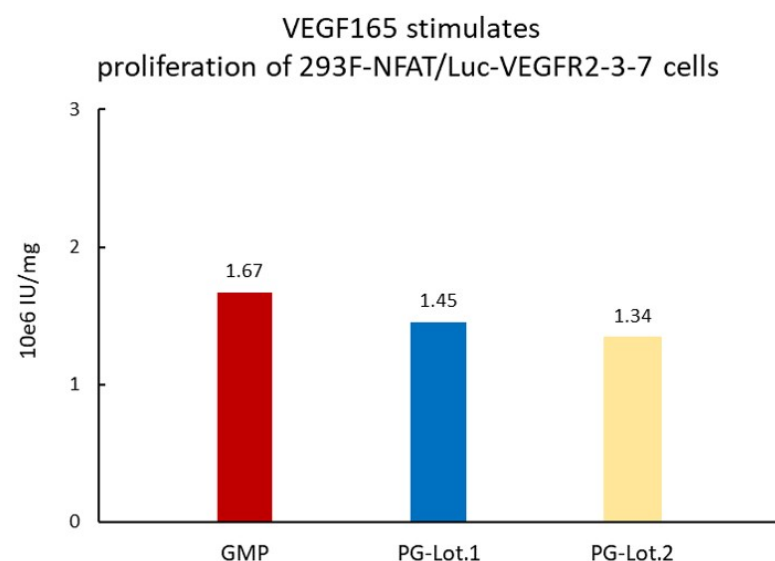
The Cell based assay shows that GMP Human VEGF165 Protein (Cat. No. GMP-VE5H23) is stable after freezing and thawing 3 times.

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The Cell based assay shows that GMP Human VEGF165 Protein (Cat. No. GMP-VE5H23) is stable at 4°C for 180 days.



The Cell based assay shows batch-to-batch consistency between Acro's GMP and PG VEGF165.

MANUFACTURING SPECIFICATIONS

ACROBiosystems GMP grade products are produced under a quality management system and in compliance with relevant guidelines: Ph. Eur General Chapter 5.2.12 Raw materials of biological origin for the production of cell-based and gene therapy medicinal products; USP<92>Growth Factors and Cytokines Used in Cell Therapy Manufacturing; USP<1043>Ancillary Materials for Cell, Gene, and Tissue-Engineered Products; ISO/TS 20399-1:2018, Biotechnology - Ancillary Materials Present During the Production of Cellular Therapeutic Products.

ACROBiosystems Quality Management System Contents:

Designed under ISO 9001:2015 and ISO 13485:2016, Manufactured and QC tested under a GMP compliance factory.

Animal-Free materials

Materials purchased from the approved suppliers by QA

ISO 5 clean rooms and automatic filling equipment

Qualified personnel

Quality-related documents review and approve by QA

Fully batch production and control records

Equipment maintenance and calibration

Validation of analytical procedures

Stability studies conducted

Comprehensive regulatory support files

[Request For Regulatory Support Files \(RSF\)](#)

ACROBiosystems provide rigorous quality control tests (fully validated equipment, processes and test methods) on our GMP grade products to ensure that they meet stringent standards in terms of purity, safety, activity and inter-batch stability, and each bulk QC lot mainly contains the following specific information:

SDS-PAGE

Protein content

Endotoxin level





- Residual Host Cell DNA content
- Residual Host Cell Protein content
- Biological activity analysis
- Microbial testing
- Mycoplasma testing
- In vitro virus assay
- Residual moisture
- Batch-to-batch consistency

Background

VEGF165 is the most abundant splice variant of VEGF-A. VEGF165 is produced by a number of cells including endothelial cells, macrophages and T cells. VEGF165 is involved in angiogenesis, vascular endothelial cell survival, growth, migration and vascular permeability. VEGF gene expression is induced by hypoxia, inflammatory cytokines and oncogenes. VEGF165 binds to heparan sulfate and is retained on the cell surface and in the extracellular matrix. VEGF165 binds to the receptor tyrosine kinases, VEGFR1 and VEGFR2. VEGF165 is the only splice variant that binds to co-receptors NRP-1 and NRP-2 that function to enhance VEGFR2 signaling. Binding of VEGF165 to VEGFR1 and VEGFR2 leads to activation of the PI3K/AKT, p38 MAPK, FAK and paxillin. VEGF plays a key role in tumor angiogenesis in many cancers.

Clinical and Translational Updates

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