

RP01323

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Recombinant Rat VEGF-A/VEGF164 Protein

Catalog No.: RP01323

Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
Rat	83785	P16612-2

Tags

C-His

Synonyms

MVCD1;VAS;vascular endothelial growth factor

A;Vasculotropin;VEGF;VEGFA;VEGF-A;VEGFMGC70609;VPF;VEGFA

Product Information

Source	Purification
HEK293 cells	> 95% by SDS-PAGE.

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize freeze-thaw cycles.

Background

Vascular endothelial growth factor A (VEGFA), also known as Vascular permeability factor (VPF). VEGFA belongs to the PDGF/VEGF growth factor family. VEGFA is a glycosylated mitogen that specifically acts on endothelial cells and has various effects, including mediating increased vascular permeability, inducing angiogenesis, vasculogenesis and endothelial cell growth, promoting cell migration, and inhibiting apoptosis. Alternatively spliced transcript variants, encoding either freely secreted or cell-associated isoforms, have been characterized. VEGFA is produced by a group of three major isoforms as a result of alternative splicing and if any three isoforms are produced (VEGFA120, VEGFA164, and VEGFA188) then this will not result in vessel defects and death of the full VEGFA knockout in mice.

Basic Information

Description

Recombinant Rat VEGF-A/VEGF164 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Ala27-Arg190) of Rat VEGFA (Accession #NP_001274037.1) fused with an 6×His tag at the C-terminus.

Bio-Activity

1. Measured by its binding ability in a functional ELISA. Immobilized Rat VEGF164 at 1 μg/mL (100 μL/well) can bind Human KDR with a linear range of 0.03-3.6 ng/mL. 2. Measured in a cell proliferation assay using human umbilical vein endothelial cells (HUVEC). The ED₅₀ for this effect is typically 0.02-0.10 ng/mL.

Storage

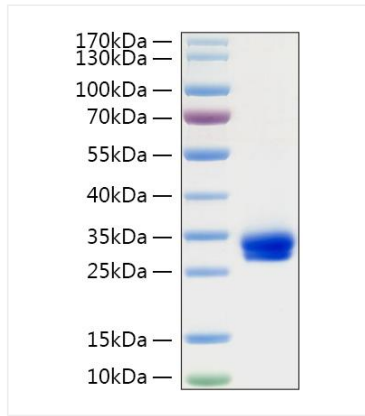
Store the lyophilized protein at -20°C to -80°C for long term. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

Contact

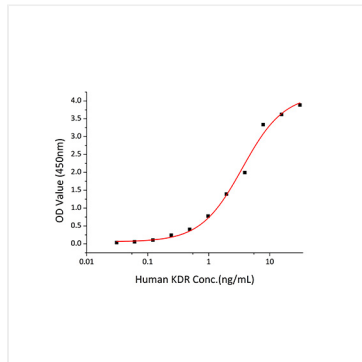


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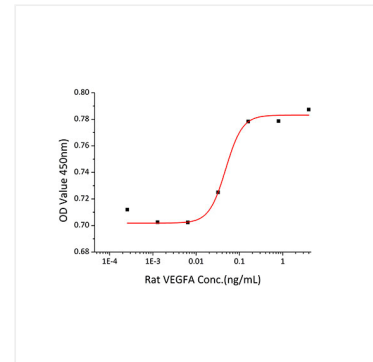
Validation Data



Recombinant Rat VEGF-A/VEGF164 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 30-32kDa.



Immobilized Recombinant Rat VEGF164 at 1 $\mu\text{g/mL}$ (100 $\mu\text{L/well}$) can bind Human KDR with a linear range of 0.03-3.6 ng/mL.



Recombinant Rat VEGF-A promotes the proliferation of HUVEC human umbilical vein endothelial cells. The ED_{50} for this effect is typically 0.02-0.10 ng/mL.