

**Catalog No.: RP01323** **Recombinant**

Species	Gene ID	Swiss Prot
Rat	83785	P16612-2

## C-His

**Synonyms**  
MVCD1;VAS;vascular endothelial growth factor

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

<b>Source</b> HEK293 cells	<b>Purification</b> ≥ 95 % as determined by SDS- PAGE
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Calculated MW	Observed MW
20.07 kDa	26-30 kDa

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

Lyophilized from a 0.22  $\mu\text{m}$  filtered solution of PBS, pH 7.4.

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 free-thaw cycles.

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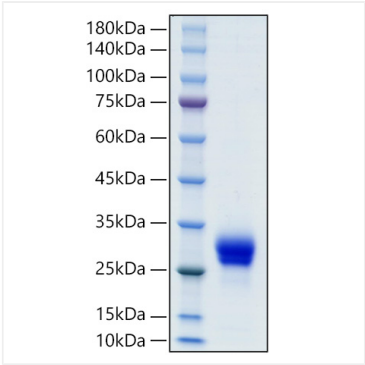
Vascular endothelial growth factor A (VEGFA), also known as Vascular permeability factor (VPF). VEGFA belongs to the PDGF/VEGF growth factor family. VEGFA is a glycosylated mitogen that specifically acts on endothelial cells and has various effects, including mediating increased vascular permeability, 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.

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 6xHis tag at the C-terminus.

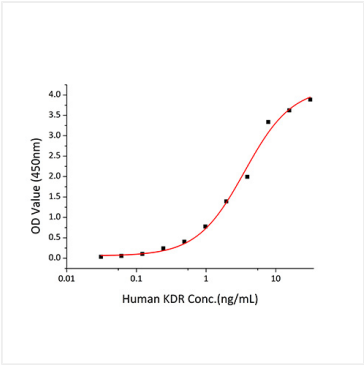
1. Measured by its binding ability in a functional ELISA. Immobilized Rat VEGF164 at 1 µg/mL (100 µL/well) can bind Human KDR with a linear range of 0.03-3.6 ng/mL. [2. Measured in a cell proliferation assay using human umbilical vein endothelial cells (HUVEC). The ED<sub>50</sub> for this effect is typically 0.02-0.10 ng/mL.

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.  
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.

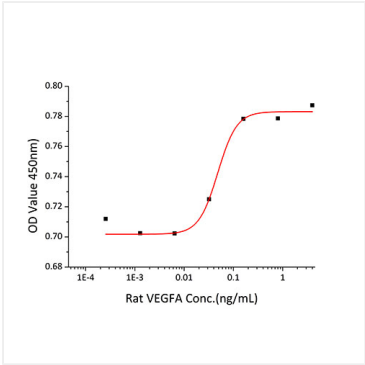
# Validation Data



Recombinant Rat VEGF-A/VEGF164 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



Immobilized Recombinant Rat VEGF164 at 1 µg/mL (100 µL/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<sub>50</sub> for this effect is typically 0.02-0.10 ng/mL.