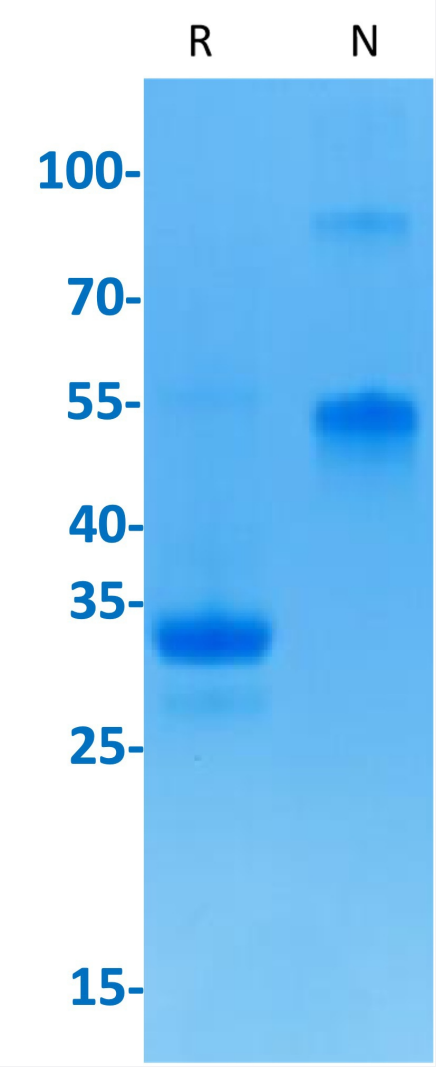
Bioactive

# VEGFA (Human) Recombinant Protein (Biotin)

Catalog # P10663 Size 100 ug

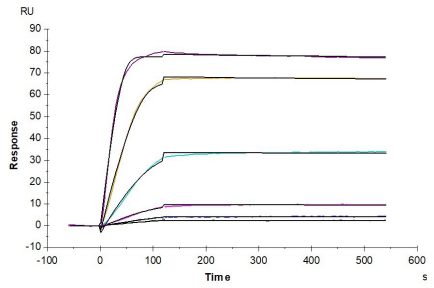
## Applications




### SDS-PAGE

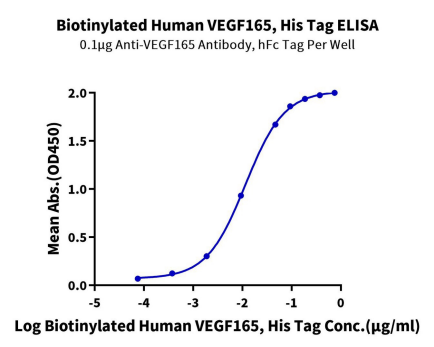
Biotinylated VEGF165 on Bis-Tris PAGE under reduced (R) condition and Non reducing (N) condition. The purity is greater than 95%.

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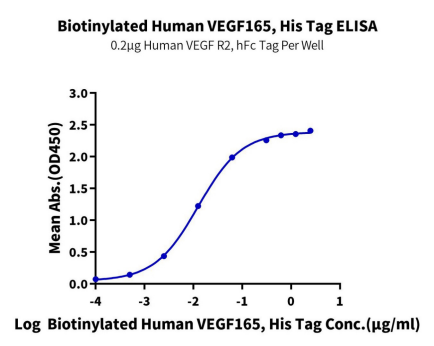

## Surface Plasmon Resonance

Biotinylated Human VEGF165, His Tag captured on CM5 Chip via streptavidin can bind Human VEGF R1, His Tag with an affinity constant of 1.36 pM as determined in SPR assay (Biacore T200).



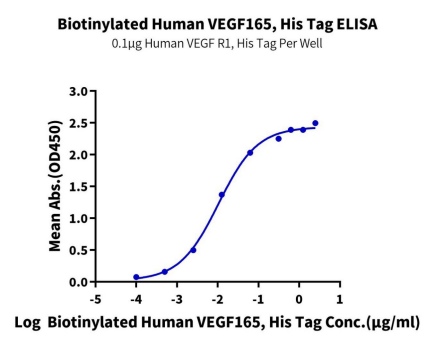

## ELISA

Immobilized Anti-VEGF165 Antibody at 1 ug/mL (100 uL/well) on the plate. Dose response curve for Biotinylated Human VEGF165, His Tag with the $EC_{50}$ of 11.6 ng/mL determined by ELISA.




## ELISA

Immobilized Human VEGF R2, hFc Tag at 2 ug/mL(100 uL/well) on the plate. Dose response curve for Biotinylated Human VEGF165, His Tag with the $EC_{50}$ of 12.6 ng/mL determined by ELISA.




## ELISA

Immobilized Human VEGF R1, His Tag at 1 ug/mL(100 uL/well) on the plate. Dose response curve for Biotinylated Human VEGF165, His Tag with the $EC_{50}$ of 10.5 ng/mL determined by ELISA.

# Specification

| | |
|---|---|
| **Product Description** | Human VEGFA (P15692-4, Ala27-Arg191) partial recombinant protein with Avi-His tag at the C-Ter minus expressed in Mammalian cell (HEK293). |
| **Sequence** | Ala27-Arg191 |

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| | |
|---|---|
| **Host** | Human |
| **Theoretical MW (kDa)** | 22.2 |
| **Reactivity** | Human |
| **Form** | Lyophilized |
| **Conjugation** | Biotin |
| **Preparation Method** | Mammalian cell (HEK293) expression system |
| **Purity** | > 95% by Tris-Bis PAGE |
| **Endotoxin Level** | < 1 EU per 1 ug as determined by the LAL method. |
| **Activity** | The $EC_{50}$ of 11.6 ng/mL determined by ELISA.<br>The affinity constant of 1.36 pM as determined in SPR assay. |
| **Recommend Usage** | Biological Activity<br>ELISA<br>Tris-Bis PAGE<br>The optimal working dilution should be determined by the end user. |
| **Storage Buffer** | Lyophilized from 0.22 um filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protec tant before lyophilization. |
| **Storage Instruction** | Store at -20°C for 12 months.<br>After reconstitution, store at -80°C for 3 months.<br>Aliquot to avoid repeated freezing and thawing. |

## Applications

- Functional Study
- Enzyme-linked Immunoabsorbent Assay
- SDS-PAGE

  Biotinylated VEGF165 on Bis-Tris PAGE under reduced (R) condition and Non reducing (N) condition. The purity is greater than 95%.
- Surface Plasmon Resonance

  Biotinylated Human VEGF165, His Tag captured on CM5 Chip via streptavidin can bind Human VEGF R1, His Tag with an affinity constant of 1.36 pM as determined in SPR assay (Biacore T200).

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## Gene Info — VEGFA

| | |
|---|---|
| **Entrez GeneID** | 7422 |
| **Protein Accession#** | P15692-4 |
| **Gene Name** | VEGFA |
| **Gene Alias** | MGC70609, VEGF, VEGF-A, VPF |
| **Gene Description** | vascular endothelial growth factor A |
| **Omim ID** | 125853 192240 |
| **Gene Ontology** | Hyperlink |
| **Gene Summary** | This gene is a member of the PDGF/VEGF growth factor family and encodes a protein that is ofte n found as a disulfide linked homodimer. This protein is a glycosylated mitogen that specifically a cts on endothelial cells and has various effects, including mediating increased vascular permeabil ity, inducing angiogenesis, vasculogenesis and endothelial cell growth, promoting cell migration, and inhibiting apoptosis. Elevated levels of this protein is linked to POEMS syndrome, also know n as Crow-Fukase syndrome. Mutations in this gene have been associated with proliferative and nonproliferative diabetic retinopathy. Alternatively spliced transcript variants, encoding either freel y secreted or cell-associated isoforms, have been characterized. There is also evidence for the u se of non-AUG (CUG) translation initiation sites upstream of, and in-frame with the first AUG, lead ing to additional isoforms. [provided by RefSeq |
| **Other Designations** | vascular endothelial growth factor isoform VEGF165\|vascular permeability factor |

## Pathway

- Bladder cancer
- Cytokine-cytokine receptor interaction
- Focal adhesion
- mTOR signaling pathway
- Pancreatic cancer
- Pathways in cancer
- Renal cell carcinoma
- VEGF signaling pathway

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## Disease

- Abortion
- Acute Disease
- Adenocarcinoma
- Albuminuria
- Altitude Sickness
- Alzheimer disease
- Amyotrophic lateral sclerosis
- Angina Pectoris
- Anoxia
- Arthritis
- Ascites
- Asperger Syndrome
- Asthma
- Atherosclerosis
- Atrophy
- Autistic Disorder
- Basal Ganglia Diseases
- Behcet Syndrome
- Biliary Tract Neoplasms
- Birth Weight
- Blindness
- Brain Ischemia
- Breast cancer
- Breast Neoplasms
- Bronchopulmonary Dysplasia

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- Calcinosis
- Carcinoma
- Cardiovascular Abnormalities
- Cardiovascular Diseases
- Cell Transformation
- Cerebral Amyloid Angiopathy
- Cerebrovascular Accident
- Chorioamnionitis
- Choroidal Neovascularization
- Chronic Disease
- Cognition
- Cognition Disorders
- Colon cancer
- Colonic Neoplasms
- Colorectal Neoplasms
- Connective Tissue Diseases
- Coronary Artery Disease
- Coronary Disease
- Coronary Restenosis
- Dementia
- Depressive Disorder
- Diabetes Complications
- Diabetes Mellitus
- Diabetic Angiopathies
- Diabetic Nephropathies
- Diabetic Neuropathies

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- Diabetic Retinopathy
- DiGeorge Syndrome
- Disease Models
- Disease Progression
- Disease Susceptibility
- Diseases in Twins
- Drug Toxicity
- Ductus Arteriosus
- Duodenal Ulcer
- Edema
- Electroconvulsive Therapy
- Elephantiasis
- Endocardial Cushion Defects
- Endometrial Neoplasms
- Endometriosis
- Enterocolitis
- Esophageal Neoplasms
- Eye Diseases
- Familial Mediterranean fever
- Femur Head Necrosis
- Fetal Diseases
- Fetal Membranes
- Frontotemporal Dementia
- Gastritis
- Gastrointestinal Hemorrhage
- Genetic Predisposition to Disease

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- Gilbert Disease
- Glioma
- Glomerulonephritis
- Graft vs Host Disease
- Head and Neck Neoplasms
- Heart Defects
- Heart Failure
- Heart Septal Defects
- Heart Valve Diseases
- Helicobacter Infections
- HELLP Syndrome
- Hematologic Diseases
- Hepatitis B
- Hodgkin Disease
- Hot Flashes
- Hyperbilirubinemia
- Hypercholesterolemia
- Hyperparathyroidism
- Hypertension
- Hypertrophy
- Idiopathic Pulmonary Fibrosis
- Infant
- Infection
- Infertility
- Inflammation
- Inflammatory Bowel Diseases

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- Insulin Resistance
- Ischemia
- Kidney Failure
- Kidney Neoplasms
- Laryngeal Neoplasms
- Leiomyoma
- Leukemia
- Liver Cirrhosis
- Liver Neoplasms
- Lung Neoplasms
- Lymphatic Metastasis
- Lymphoma
- Lymphoproliferative Disorders
- Macular Degeneration
- Macular Edema
- Malignant melanoma
- Melanoma
- Metabolic Syndrome X
- Migraine Disorders
- Mouth Neoplasms
- Mucocutaneous Lymph Node Syndrome
- Multiple Myeloma
- Multiple Sclerosis
- Musculoskeletal Diseases
- Myocardial Infarction

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- Myocardial Ischemia
- Narcolepsy
- Nasopharyngeal Neoplasms
- Neoplasm Invasiveness
- Neoplasm Metastasis
- Neoplasm Recurrence
- Neoplasms
- Neovascularization
- Nephritis
- Neuroblastoma
- Obesity
- Obstetric Labor
- Occupational Diseases
- Osteoarthritis
- Osteoporosis
- Ovarian cancer
- Ovarian Neoplasms
- Pancreatitis
- Paraparesis
- Parkinson disease
- Peptic Ulcer
- Peritoneal Diseases
- Polycystic Kidney
- Polycystic kidney disease
- Polycystic Ovary Syndrome
- Postoperative Complications
- Precancerous Conditions

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- Prediabetic State
- Pre-Eclampsia
- Pregnancy
- Pregnancy Complications
- Premature Birth
- Prostate cancer
- Prostatic Neoplasms
- Proteinuria
- Pseudoxanthoma Elasticum
- Psoriasis
- Pterygium
- Pulmonary Disease
- Pulmonary Edema
- Pulmonary Fibrosis
- Purpura
- Rectal Neoplasms
- Recurrence
- Renal Insufficiency
- Respiratory Distress Syndrome
- Retinopathy of Prematurity
- Sarcoidosis
- Sarcoma
- Scleroderma
- Skin Diseases
- Skin Neoplasms
- Social Perception

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- Spondylitis
- Stomach Neoplasms
- Stomach Ulcer
- Stroke
- Sudden Infant Death
- Supranuclear Palsy
- Temporal Arteritis
- Tetralogy of Fallot
- Thrombosis
- Thyroid Neoplasms
- Urinary Bladder Neoplasms
- Urinary Calculi
- Urinary Tract Infections
- Urination Disorders
- Uterine Cervical Neoplasms
- Uterine Neoplasms
- Uveitis
- Ventricular Outflow Obstruction
- Vesico-Ureteral Reflux
- Vision
- Waldenstrom Macroglobulinemia
- Werner syndrome

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