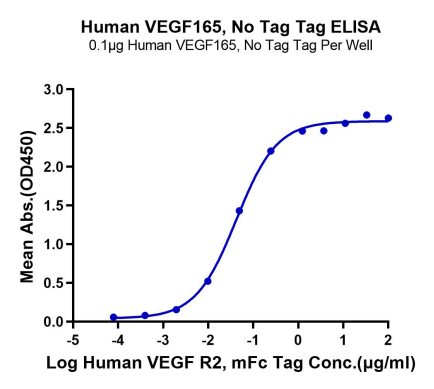
Bioactive HuPro®

VEGFA (Human) Recombinant Protein

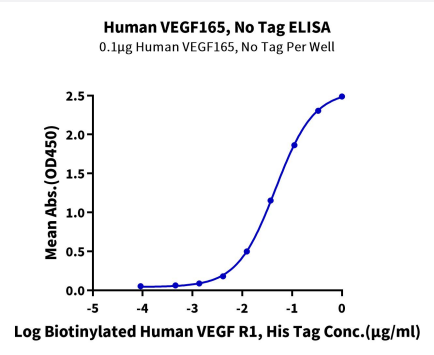
Catalog # P10291 Size 100 ug

Applications



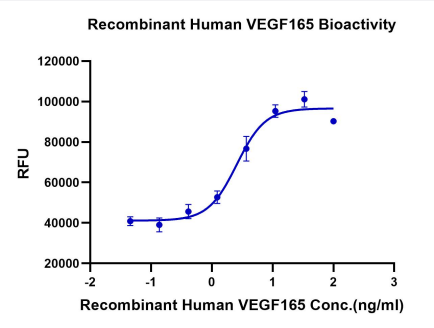
Enzyme-linked Immunoabsorbent Assay

Immobilized Human VEGF165 at 1 ug/ml (100 ul/Well) on the plate. Dose response curve for Human VEGFR2, mFc Tag with the EC_{50} of 42.3 ng/ml determined by ELISA.



ELISA

Immobilized Human VEGF165 at 1 ug/ml (100 ul/Well) on the plate. Dose response curve for Biotinylated Human VEGFR1, His Tag with the EC_{50} of 46.4 ng/ml determined by ELISA (QC Test).



Bioactivity

Human VEGF165 stimulates proliferation of human umbilical vein endothelial cells (HUVEC) with the ED50 for this effect is 2.57 ng/ml (QC Test).

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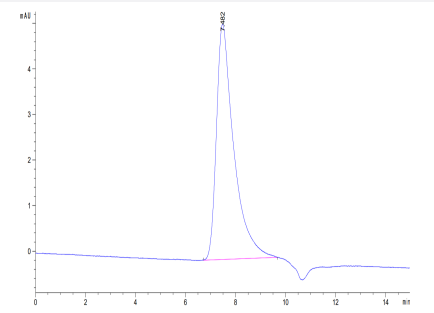
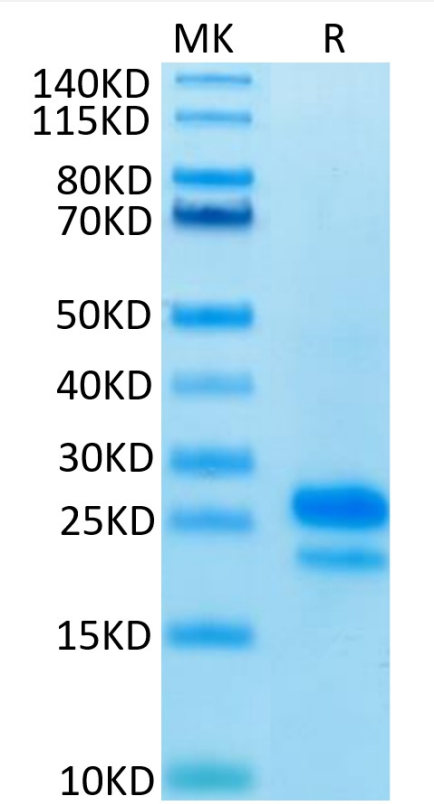


SEC-HPLC

The purity of Human VEGF165 is greater than 95% as determined by SEC-HPLC.



Tris-Bis PAGE

Human VEGF165 on Tris-Bis PAGE under reduced condition. The purity is greater than 95%.

Specification

Product Description	Human VEGFA (P15692-4, Ala27-Arg191) partial recombinant protein expressed in HEK293 cells.
Sequence	Ala27-Arg191
Host	Human
Theoretical MW (kDa)	19.2
Form	Lyophilized
Preparation Method	Mammalian cell (HEK293) expression system
Purity	> 95% as determined by Tris-Bis PAGE;> 95% as determined by HPLC
Endotoxin Level	< 1 EU per 1 ug of protein (determined by LAL method)

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Quality Control Testing	Bioactivity, ELISA and SEC-HPLC ELISA Immobilized Human VEGF165 at 1 ug/ml (100 ul/Well) on the plate. Dose response curve for Biotinylated Human VEGFR1, His Tag with the EC_{50} of 46.4 ng/ml determined by ELISA (QC Test). Bioactivity Human VEGF165 stimulates proliferation of human umbilical vein endothelial cells (HUVEC) with the ED50 for this effect is 2.57 ng/ml (QC Test). SEC-HPLC The purity of Human VEGF165 is greater than 95% as determined by SEC-HPLC. Tris-Bis PAGE Human VEGF165 on Tris-Bis PAGE under reduced condition. The purity is greater than 95%.
Recommend Usage	Biological Activity ELISA SEC-HPLC Tris-Bis PAGE The optimal working dilution should be determined by the end user.
Storage Buffer	Lyophilized from filtered solution in PBS, pH 7.4 (5% trehalose).
Storage Instruction	After reconstitution with deionized water to a final concentration more than 100 ug/ml, store at 4°C for 1 week. For long term storage, store at -80°C for 1 year. Aliquot to avoid repeated freezing and thawing.

Applications

- Functional Study
- Enzyme-linked Immunoabsorbent Assay

  Immobilized Human VEGF165 at 1 ug/ml (100 ul/Well) on the plate. Dose response curve for Human VEGFR2, mFc Tag with the EC_{50} of 42.3 ng/ml determined by ELISA.

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

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Gene Ontology	Hyperlink
Gene Summary	This gene is a member of the PDGF/VEGF growth factor family and encodes a protein that is often found as a disulfide linked homodimer. This protein 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. Elevated levels of this protein is linked to POEMS syndrome, also known as Crow-Fukase syndrome. Mutations in this gene have been associated with proliferative and nonproliferative diabetic retinopathy. Alternatively spliced transcript variants, encoding either freely secreted or cell-associated isoforms, have been characterized. There is also evidence for the use of non-AUG (CUG) translation initiation sites upstream of, and in-frame with the first AUG, leading 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

Disease

- Abortion
- Acute Disease
- Adenocarcinoma
- Albuminuria
- Altitude Sickness
- Alzheimer disease

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- 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
- Calcinosis
- Carcinoma
- Cardiovascular Abnormalities
- Cardiovascular Diseases
- Cell Transformation
- Cerebral Amyloid Angiopathy
- Cerebrovascular Accident

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- 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
- Diabetic Retinopathy
- DiGeorge Syndrome
- Disease Models
- Disease Progression
- Disease Susceptibility
- Diseases in Twins
- Drug Toxicity

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- 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
- Gilbert Disease
- Glioma
- Glomerulonephritis
- Graft vs Host Disease
- Head and Neck Neoplasms
- Heart Defects
- Heart Failure

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- 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
- Insulin Resistance
- Ischemia
- Kidney Failure
- Kidney Neoplasms
- Laryngeal Neoplasms
- Leiomyoma
- Leukemia

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- 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
- Myocardial Ischemia
- Narcolepsy
- Nasopharyngeal Neoplasms
- Neoplasm Invasiveness
- Neoplasm Metastasis
- Neoplasm Recurrence
- Neoplasms
- Neovascularization

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- 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
- Prediabetic State
- Pre-Eclampsia
- Pregnancy
- Pregnancy Complications
- Premature Birth
- Prostate cancer
- Prostatic Neoplasms

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- 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
- Spondylitis
- Stomach Neoplasms
- Stomach Ulcer
- Stroke
- Sudden Infant Death
- Supranuclear Palsy

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- 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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