Datasheet for ABIN2870566

VEGF Protein (AA 27-147) (AVI tag,His tag,Biotin)

2 Images | 1 Publication

Go to Product page

Overview

Quantity:	200 µg
Target:	VEGF
Protein Characteristics:	AA 27-147
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This VEGF protein is labelled with AVI tag,His tag,Biotin.

Product Details

Brand:	MABSol®,PrecisionAvi
Sequence:	AA 27-147
Specificity:	Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.
Characteristics:	This protein carries an Avi tag (Avitag™) at the N-terminus, followed by a polyhistidine tag. The protein has a calculated MW of 16.7 kDa. As a result of glycosylation, the protein migrates as 18 kDa and 22 kDa on a SDS-PAGE gel under reducing (R) condition and 35-40 kDa under non-reducing (NR) condition.
Purity:	>95 % as determined by reduced SDS-PAGE.
Endotoxin Level:	Less than 1.0 EU per µg by the LAL method.

Target Details

Target:	VEGF
Alternative Name:	VEGF (VEGF Products)
Background:	Vascular endothelial growth factor (VEGF), also known as vascular permeability factor (VPF) and VEGF-A, and is a member of the platelet-derived growth factor (PDGF)/vascular endothelial growth factor (VEGF) 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. Alternatively spliced transcript variants, encoding either freely secreted or cell-associated isoforms, have been characterized. Alternatively spliced isoforms of 121,145,165,183,189 and 206 amino acids in length are expressed in humans. VEGF165 appears to be the most abundant and potent isoform, followed by VEGF121 and VEGF189. VEGF121 is the only form that lacks a basic heparinbinding region and is freely diffusible. Mouse embryos expressing only the corresponding isoform (VEGF120) do not survive to term, and show defects in skeletogenesis. Human VEGF121 shares 87 % aa sequence identity with corresponding regions of mouse and rat, 93 % with feline, equine and bovine, and 91 %, 95 % and 96 % with ovine, canine and porcine VEGF, respectively. VEGF121 induces the proliferation of lymphatic endothelial cells. The lymphangiogenesis may be promoted by upregulation of VEGF121, which may in turn act in part via induction of VEGF-C.
Molecular Weight:	16.7 kDa

Application Details

Comment:	Ready-to-use AvitagTM biotinylated protein: The product is exclusively produced using the AvitagTM technology. Briefly, a unique 15 amino acid peptide, the Avi tag, is introduced into the recombinant protein during expression vector construction. The single lysine residue in the Avi tag is enzymatically biotinylated by the E. Coli biotin ligase BirA. This single-point enzymatic labeling technique brings many advantages for commonly used binding assays. The biotinylation happens on the lysine residue of Avi tag, and therefore does NOT interfere with the target protein's natural binding activities. In addition, when immobilized on an avidin-coated surface, the protein orientation is uniform because the position of the Avi tag in the protein is precisely controlled.
Restrictions:	For Research Use only

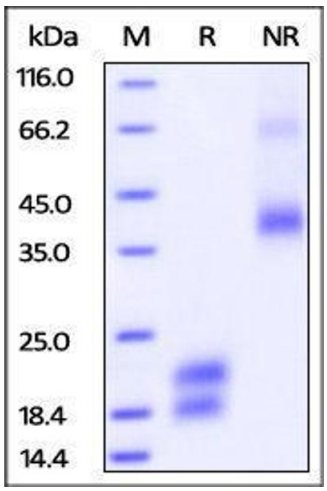
Handling

Format:	Lyophilized
Buffer:	PBS, pH 7.4
Handling Advice:	Please avoid repeated freeze-thaw cycles.
Storage:	-20 °C

Publications

Product cited in:	Yang, Kim, Seong, Tae, Kwon: "Comparative studies of the serum half-life extension of a protein via site-specific conjugation to a species-matched or -mismatched albumin." in: **Biomaterials science**, Vol. 6, Issue 8, pp. 2092-2100, (2018) (PubMed). Kenniston, Taylor, Conley, Cosic, Kopacz, Lindberg, Comeau, Atkins, Bullen, TenHoor, Adelman, Sexton, Edwards, Nixon: "Structural basis for pH-insensitive inhibition of immunoglobulin G recycling by an anti-neonatal Fc receptor antibody." in: **The Journal of biological chemistry**, Vol. 292, Issue 42, pp. 17449-17460, (2017) (PubMed).

Images



SDS-PAGE

Image 1. Biotinylated Human VEGF121, His Tag on SDS-PAGE under reducing (R) and no-reducing (NR) conditions. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

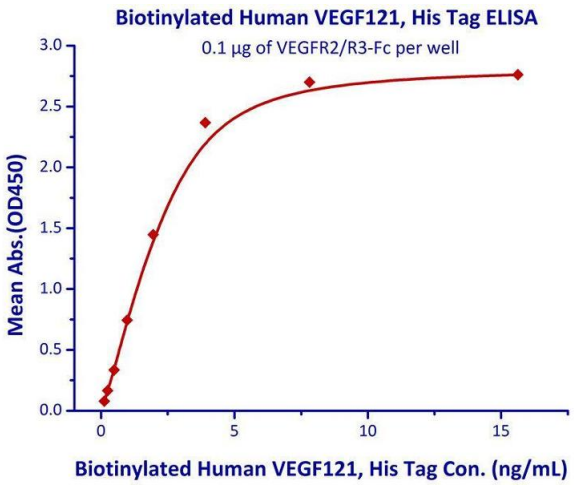


Image 2. Measured by its binding ability in a functional ELISA. Immobilized VEGFR2/R3-Fc at 1µg/mL (100 µL/well) can bind Biotinylated Human VEGF121, His Tag with a linear range of 0.1-2 ng/mL.