

Datasheet for 009-001-C23**rHuman VEGF-121 Protein****Overview**

Description:	VEGF-121 Human Recombinant Protein - 009-001-C23
Item No.:	009-001-C23
Size:	10 µg
Applications:	SDS-PAGE
Origin:	Human
Expressed in:	E. coli

Product Details

Background:	Vascular endothelial growth factor-A was originally isolated from tumor cells and referred to as Tumor Angiogenesis Factor. Although expressed at high levels in certain tumor-derived cells it is produced by a wide variety of cell types. In addition to stimulating vascular growth, vascular permeability, cell migration, and endothelial cell proliferation and growth, it may play a role in stimulating vasodilation via nitric oxide-dependent pathways and in inhibition of apoptosis. VEGF binds to the FLT1/VEGFR1 and KDR/VEGFR2 receptors, heparan sulfate and heparin. Alternative splicing of the mRNA for VEGF-A results in several isoforms of the protein being produced. Rat and bovine VEGF are one amino acid shorter than the human factor, and the bovine and human sequences show a homology of 95 percent. In contrast to other factors mitogenic for endothelial cells such as FGF-1, FGF-2 and PDGF, VEGF is synthesized as a precursor containing a typical hydrophobic secretory signal sequence of 26 amino acids. Glycosylation is not required for efficient secretion of VEGF. VEGF121 is acidic, freely secreted, and widely expressed. This isoform is produced by alternative promoter usage and alternative initiation. It starts at an alternative upstream CUG codon and is post-translationally processed to produce the secreted VEGF peptide and a N-terminal peptide N-VEGF. The unprocessed protein and the N-VEGF peptide may localize to the nucleus, the endoplasmic reticulum and the Golgi or the extracellular matrix. Recombinant Human VEGF-121 produced in E.coli is a double, non-glycosylated, polypeptide chain containing 121 amino acids and having a molecular mass of 28423 Daltons.
Synonyms:	Vascular endothelial growth factor A-121, VEGF-A121 cytokine, Vascular permeability factor, VPF-121
Species of Origin:	Human
Expressed in:	E. coli

Type:	Recombinant Protein
Low Endotoxin:	Yes

Target Details

Gene Name:	VEGFA
Purity/Specificity:	Purity was determined to be greater than 95% as determined by analysis by RP-HPLC, and by reducing and non-reducing SDS-PAGE, against known standard.
Relevant Links:	• UniProtKB - P15692-9 • NCBI

Application Details

Tested Applications:	SDS-PAGE
Application Note:	VEGF-121 protein has been tested by SDS-PAGE and is suitable as a control for polyclonal or monoclonal anti-VEGF-121 in immunological assays.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
Other:	Biological Activity: The biological activity is determined by the dose- dependent stimulation of the proliferation of human umbilical vein endothelial cells (HUVEC) using a concentration range of 0.1-0.4 ng/ml. Endotoxin Level: Measured by LAL is <0.01ng/μg or <0.1EU/μg.

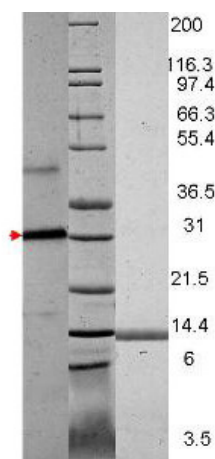
Formulation

Physical State:	Lyophilized
Concentration:	0.1 mg/mL by UV absorbance at 280 nm
Buffer:	0.1% Trifluoroacetic acid
Preservative:	None
Stabilizer:	None
Reconstitution Volume:	10μl (10-100μl)
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	Store vial at -20° C prior to restoration. Dilute only prior to immediate use. Maintain sterility. This product DOES NOT contain preservative. DO NOT VORTEX. We recommend adding a carrier protein such as HSA or BSA to 0.1% (i.e. 1.0 mg/mL) . For best results aliquot contents and freeze at -20° C or colder. Avoid cycles of freezing and thawing. Centrifuge vial before each opening to dislodge contents from the cap and to clarify if contents are not clear after standing at room temperature.
Expiration:	Expiration date is six (6) months from date of receipt.

Images



SDS-PAGE

SDS-PAGE shows band corresponding to VEGF (1 μ g) in lane 1 (unreduced, arrowhead) and lane 3 (reduced). Molecular weight estimation was made by comparison to prestained MW markers, lane 2.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.