# Data Sheet (Cat.No.TMPS-00168)

TargetMol

## VEGF121 Protein, Human, Recombinant (E. coli)

### General Information

Synonyms: VEGF-121;Vascular Endothelial Growth Factor 121;VPF;Vascular Permeability Factor

Protein Construction: Pro28-Arg147

Species: Human

Expression Host: E. coli

Accession: P15692-9

Molecular Weight: ~28.2 kDa (Non-reducing conditions)

### QC Testing

Biological Activity: ED 50 < 5.0 ng/ml, measured by a cell proliferation assay using HUVEC Cells, corresponding to a specific activity of > 2.0 × 10 5 units/mg.

Purity: > 95% as determined by SDS-PAGE; > 95% as determined by HPLC

Endotoxin: < 0.2 EU/μg of protein as determined by the LAL method.

Formulation: Lyophilized from a 0.2 μm filtered solution in PBS.

### Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

VEGF-A121 is one of five isoforms (121, 145, 165, 189, and 206) of VEGF protein, a cytokine belonging to the Platelet Differentiation Growth Factor (PDGF) family, and existing as a disulfide-linked homodimeric glycoprotein. In contrast to the longer isoforms, VEGF-A121 is more freely diffusible, and cannot bind to heparin. In vivo, VEGF is expressed predominantly in lung, heart, kidney, and adrenal glands, and the expression of VEGF is up-regulated by a number of growth factors, including PDGF, Fibroblast Growth Factor (FGF), Epidermal Growth Factor (EGF), and Tumor Necrosis Factor (TNF). VEGF signals via binding to two tyrosine kinase receptors: the Fms-like tyrosine kinase 1 (Flt-1) and the kinase domain receptor (KDR). VEGF is a specific mitogen and survival factor, contributing

to abnormal angiogenesis and cancer development.