



## RayBiotech, Inc.

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# Certificate of Analysis and Data Sheet

## Recombinant Human Vascular Endothelial Growth Factor (VEGF)

**Catalog No.**  
IP-01-241P

**Source**  
E. Coli

### ***Description***

Recombinant Human VEGF produced in E.Coli is a double, non-glycosylated, polypeptide chain containing 165 amino acids and having a molecular mass of 38231 Dalton. The VEGF is purified by proprietary chromatographic techniques.

### ***Physical Appearance***

Sterile Filtered White lyophilized (freeze-dried) powder.

### ***Formulation***

The protein was lyophilized from a concentrated (1mg/ml) solution with no additives.

### ***Solubility***

It is recommended to reconstitute the lyophilized rHuVEGF in sterile 18MΩ -cm H<sub>2</sub>O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

### ***Stability***

Lyophilized VEGF although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution VEGF should be stored at 4 °C between 2-7 days and for future use below -18 °C.

For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

**Please avoid freeze-thaw cycles.**

**The products are furnished for LABORATORY RESEARCH USE ONLY.  
Not for diagnostic or therapeutic use.**



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### ***Purity***

Greater than 98.0% as determined by:

- 1) Analysis by RP-HPLC.
- 2) Anion-exchange FPLC.
- 3) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.

### ***Amino acid sequence***

The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Pro-Met-Ala-Glu.

### ***Dimers and aggregates***

Less than 1% as determined by silver-stained SDS-PAGE gel analysis.

### ***Biological Activity***

VEGF is fully biologically active when compared to standards.

The biological activity is calculated by the mitogenic effect of human dermal microvascular endothelial cells using a concentrated solution of 1 to 100 ng/ml.

### ***Endotoxin***

Less than 0.1 ng/ $\mu$ g (IEU/ $\mu$ g) of VEGF.

### ***Protein content***

Protein quantitation was carried out by two independent methods:

- 1) UV spectroscopy at 280 nm using the absorbency value of 0.2875 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
- 2) Analysis by RP-HPLC, using a calibrated solution of VEGF as a Reference Standard.

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