

## RayBiotech, Inc.

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# Certificate of Analysis and Data Sheet

## Recombinant Human Fibroblast Growth Factor-basic

**Catalog No.**  
228-10452

**Source:**  
*Escherichia Coli*

### **Synonyms:**

Prostatropin, HBGH-2, HBGF-2, FGF-2, FGF-b.

### **Introduction:**

Basic fibroblast growth factor is a member of the fibroblast growth factor (FGF) family. FGF family members possess broad mitogenic and cell survival activities, and are involved in a variety of biological processes, including embryonic development, cell growth, morphogenesis, tissue repair, tumor growth and invasion. This protein functions as a modifier of endothelial cell migration and proliferation, as well as an angiogenic factor. It acts as a mitogen for a variety of mesoderm- and neuroectoderm-derived cells in vitro, thus is thought to be involved in organogenesis. Three alternatively spliced variants encoding different isoforms have been described. The heparin-binding growth factors are angiogenic agents in vivo and are potent mitogens for a variety of cell types in vitro. There are differences in the tissue distribution and concentration of these 2 growth factors.

### **Description:**

Fibroblast Growth Factor-2 Human Recombinant (FGF-2) produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 155 amino acids and having a molecular mass of 17353 Dalton.

The FGF-b is purified by proprietary chromatographic techniques.

### **Source:**

*Escherichia Coli*.

### **Physical Appearance:**

Sterile Filtered White lyophilized (freeze-dried) powder.

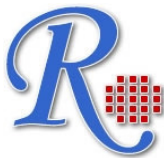
### **Stability:**

Lyophilized Fibroblast Growth Factor-2 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution FGF-b 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 prevent freeze-thaw cycles.**

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



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### ***Formulation:***

The protein was lyophilized from a concentrated (1mg/ml) solution in PBS, pH 7.4.

### ***Solubility:***

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

### ***Purity:***

Greater than 96.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

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

The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Glu-Gly-Glu-Ile

### ***Biological Activity:***

The ED<sub>50</sub>, calculated by the dose-dependant proliferation of BAF3 cells expressing FGF receptors (measured by <sup>3</sup>H-thymidine uptake) is <0.5 ng/ml, corresponding to a specific activity of 2 x 10<sup>6</sup> Units/mg.

### ***Protein content:***

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 0.8511 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 Fibroblast Growth Factor-b as a Reference Standard.

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