

## RayBiotech, Inc.

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# Certificate of Analysis and Data Sheet

## Recombinant Rat Fibroblast Growth Factor 9 (FGF9)

**Catalog No.**  
228-10464

**Source:**  
*Escherichia Coli.*

### **Synonyms**

GAF (Glia-activating factor), HBGF-9, MGC119914, MGC119915, FGF-9.

### **Introduction**

Rat and mouse FGF-9 show a very high homology to human FGF-9. The transcripts for FGF-9 have been found in brain and in kidney tissue. Fibroblast Growth Factor-9 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. FGF9 was isolated as a secreted factor that exhibits a growth-stimulating effect on cultured glial cells. In nervous system, this protein is produced mainly by neurons and may be important for glial cell development. Expression of the mouse homolog of this gene was found to be dependent on Sonic hedgehog (Shh) signaling. Mice lacking the homolog gene displayed a male-to-female sex reversal phenotype, which suggested a role in testicular embryogenesis. Fibroblast Growth Factor 9 may have a role in glial cell growth and differentiation during development, gliosis during repair and regeneration of brain tissue after damage, differentiation and survival of neuronal cells, and growth stimulation of glial tumors.

### **Description**

Rat FGF-9 Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 205 amino acids and having a molecular mass of 23308 Dalton.

The FGF-9 Mouse Recombinant is purified by proprietary chromatographic techniques.

### **Physical Appearance**

Sterile Filtered White lyophilized (freeze-dried) powder.

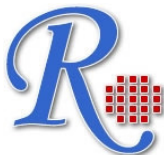
### **Formulation**

The FGF-9 was lyophilized from a concentrated (1mg/ml) sterile solution containing 10mM NaP, pH-7.5 &, 75mM Ammonium Sulfate.

### **Solubility**

It is recommended to reconstitute the lyophilized Rat FGF-9 in sterile 18MΩ-cm H<sub>2</sub>O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

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



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### ***Stability***

Lyophilized Rat Fibroblast Growth Factor-9 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution FGF9 Rat Recombinant 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).

**Avoid multiple freeze-thaw cycles.**

### ***Purity***

Greater than 95.0% as determined by

(a) Analysis by RP-HPLC.

(b) Analysis by SDS-PAGE.

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

PLGEVGSYFG VQDAVPFGNV PVL PVDSPVL LNDHLGQSEA GGLPRGPAVT DLDHLKGILR  
RRQLYCRTGF HLEIFPNGTI QGTRKDHSRF GILEFISIAV GLVSIRGVDS GLYLG MNEKG  
ELYGSEKLTQ ECVFREQFEE NWYNTYSSNL YKHVDTGRRY YVALNKDGTP REGTRTKRHQ  
KFTHFLPRPV DPKVPELYK DILSQS.

### ***Biological Activity***

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

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