

Recombinant Human Fibroblast Growth Factor-acidic (FGF-a)

Certificate of Analysis and Data Sheet

➤ Source: E.Coli	➤ Catalog No. CTK-264
----------------------------	---------------------------------

➤ **Background :**

Single-chain polypeptide growth factor that plays a significant role in the process of wound healing and is a potent inducer of angiogenesis. It binds to heparin, which potentiates its biological activity and protects it from proteolysis. The growth factor is an extremely potent inducer of DNA synthesis in a variety of cell types from mesoderm and neuroectoderm lineages, and also has chemotactic and mitogenic activities. It was originally named acidic fibroblast growth factor based upon its chemical properties and to distinguish it from basic fibroblast growth factor. Other homologous FGF belonging to the same family are int-2 (FGF-3), FGF-5 , FGF-6 , K-FGF and KGF (keratinocyte growth factor =FGF-7). All factors are products of different genes, some of which are Oncogene products (FGF-3 , FGF-4 , FGF-5).

➤ **Description :**

Recombinant Human Fibroblast Growth Factor-acidic (FGF-1) produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 155 amino acids and having a molecular mass of 17463 Dalton.
The acidic FGF is purified by proprietary chromatographic techniques.

➤ **Physical Appearance:**

Sterile Filtered White lyophilized (freeze-dried) powder.

➤ **Formulation:**

Recombinant FGF-1 was lyophilized from a concentrated (1mg/ml) sterile solution containing 10mM Tris pH=7.6 and 100mM NaCl.

➤ **Solubility:**

It is recommended to reconstitute the lyophilized FGF-acidic in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

➤ **Stability:**

Lyophilized FGF-acidic although stable at room temperature for 3 weeks, should be stored desiccated below -18 C. Upon reconstitution FGF-acidic 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.

➤ **Purity:**

Greater than 95.0% as determined by:

(a) Analysis by RP-HPLC.

(b) Anion-exchange FPLC.

(c) 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 Met-Phe-Asn-Leu-Pro.

➤ **Dimers and aggregates:**

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

➤ **Biological Activity:**

This Recombinant FGF-1 is fully biologically active when compared to standards. The ED50, calculated by the dose-dependant proliferation of BAF3 cells expressing FGF receptors (measured by 3H-thymidine uptake) is less than 10 ng/ml, corresponding to a specific activity of 10 Units/mg.

➤ **Endotoxin:**

Less than 0.1 ng/μg (IEU/μg) of FGF-acidic .

➤ **Protein content:**

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm.

2. Analysis by RP-HPLC, using a standard solution of FGF-acidic as a Reference Standard.

➤ **Usage:**

This material is offered for research, laboratory or further evaluation purposes.