

Recombinant Murine Fibroblast Growth Factor-basic (FGF-b)

Certificate of Analysis and Data Sheet

➤ Source: E.Coli	➤ Catalog No. CTK-386
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➤ **Background :**

FGF is a single-chain polypeptide growth factor that plays a significant role in the process of wound healing and is a potent inducer of angiogenesis. Several different forms of the protein exist ranging from 18-24 kDa in size due to the use of alternative start sites within the fgf-2 gene. It has a 55 percent amino acid residue identity to FGF-1 and has potent heparin-binding activity. The growth factor is an extremely potent inducer of DNA synthesis in a variety of cell types from mesoderm and neuroectoderm lineages. It was originally named basic fibroblast growth factor based upon its chemical properties and to distinguish it from acidic 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 Mouse basic FGF (FGF-2) produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 145 amino acids and having a molecular mass of 16320 Dalton.
Murine FGF-basic is purified by proprietary chromatographic techniques.

➤ **Physical Appearance:**

Sterile Filtered White Lyophilized (freeze-dried) powder.

➤ **Formulation:**

The protein was lyophilized with no additives.

➤ **Solubility:**

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

➤ **Stability:**

Lyophilized Mouse FGF although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution Murine FGF 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
Pro-Ala-Leu-Pro-Glu.

➤ **Dimers and aggregates:**

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

➤ **Biological Activity:**

The ED50, calculated by the dose-dependant proliferation of BALB/3T3 cells is <0.5 ng/ml.

➤ **Endotoxin:**

Less than 0.1 ng/ μg (IEU/ μg) of Recombinant Murine FGF-b.

➤ **Protein content:**

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 0.885 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 FGF-b as a Reference Standard.

➤ **Usage:**

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