



FGF-2 (FGF-basic) Bovine, *E. coli* Recombinant Protein (155 aa)

Product Data Sheet

Cat. No.:	A32880010	A32880050	A32881000
Size:	10 µg	50 µg	1 mg

Description

Our bioactive *FGF-2 (FGF-basic) Bovine, E. coli Recombinant Protein (155 aa)*, also known as Fibroblast Growth Factor 2, is a single, non-glycosylated, polypeptide chain that contains 155 amino acids and has a 17250 Dalton molecular mass. The FGF-2 is purified by proprietary chromatographic techniques.

Summary

FGF-basic, a member of the fibroblast growth factor (FGF) family, is a non-glycosylated, heparin-binding growth factor and signaling protein encoded by the FGF2 gene. It binds to and exerts effects via specific fibroblast growth factor receptor (FGFR) proteins. Like other FGF family members, FGF-basic possesses broad mitogenic and cell survival activities, and is involved in a variety of biological processes, including embryonic development, cell growth, morphogenesis, tissue repair, tumor growth and invasion.

Additionally, FGF-basic is a critical component of human embryonic stem cell (hESCs) culture medium; the growth factor is necessary for the cells to remain in an undifferentiated state. As a result, FGF-basic has been used to develop chemically-defined, serum-free and feeder-free hESCs culture mediums.

Other Names

Bovine Fibroblast Growth Factor-2, Cow FGF2, FGF-2, FGF basic, FGF-b, Basic fibroblast growth factor, bFGF, Heparin-binding growth factor 2, HBGF-2.

Amino Acid Sequence

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

Source

E. coli

Formulation

Sterile filtered white lyophilized (freeze-dried) powder. The protein was lyophilized from a concentrated (1 mg/ml) sterile solution containing 1% [HSA](#).

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Purity

Purity greater than 97.0% as determined by:

1. Analysis by RP-HPLC.
2. Analysis by SDS-PAGE.

Biological Activity

The ED₅₀, measured in a mitogenic assay using quiescent NR6R-3T3 fibroblasts was found to be <0.1 ng/ml, corresponding to a specific activity of 3 x 10⁶ Units/mg.

Protein Content

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 0.85 as the extinction coefficient for a 0.1% (1 mg/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-2 Bovine as a Reference Standard.

Reconstitution

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

Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage/Expiration

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

Usage

This product is intended for **Laboratory Research Use Only**. Not for use in diagnostic or therapeutic procedures. This product may not be used as a pharmaceutical or veterinary drug, agricultural product, or food additive.

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