

Recombinant Human FGF Basic Protein (GMP Grade)

Please read the manual carefully before use.

Cat. No. PM104

Version No. Version 1.1

Storage: at -18°C or below for two years

Description

Basic Fibroblast Growth Factor (FGF-basic), also known as bFGF or FGF2, is a member of the fibroblast growth factor family. As a ligand for FGFR1, FGFR2, FGFR3, and FGFR4, bFGF plays a critical role in regulating cell survival, proliferation, differentiation, and migration^[1]. FGF-basic is an essential component of human embryonic stem cell (hESC) culture media, required for maintaining cells in an undifferentiated state. When combined with BMP4, it promotes the differentiation of embryonic stem cells into mesodermal lineages^[2]. In both in vivo and in vitro settings, bFGF demonstrates potent angiogenic activity, stimulates smooth muscle cell growth, and enhances wound healing and tissue regeneration^[3].

This product is a sequence-optimized human FGF-basic, produced in a prokaryotic expression system through fermentation and highly purified. It exhibits enhanced chemical stability and high biological activity, making it suitable for the culture of various primary cells and stem cells.

Product Information

Expression System: *E.coli*

Molecular Weight: 17 kDa

Purity: >95% by SDS-PAGE

Endotoxin Concentration: <10 EU/mg

Biological Activity: Determined by a cell proliferation assay using NIH-3T3 cells. The ED50 is < 2 ng/ml.

Form: Sterile lyophilized powder

Kit Content

Component	PM104-01	PM104-02	PM104-03
Recombinant Human FGF Basic Protein (GMP Grade)	10 µg	50 µg	1 mg

Usage Guide

- The lyophilized powder is stable for 2 years when stored at -18°C or below.
- Reconstitution: Dissolve in sterile water for injection (WFI) or sterile ultrapure water to a final concentration of ≥100 µg/mL, then aliquot and store under the following conditions: -20°C (stable for 6 months), -80°C (stable for 12 months), or 2-8°C (stable for 1 week for short-term use). Avoid repeated freeze-thaw cycles to maintain stability.

References

- [1] Farooq M, Khan AW, Kim MS, Choi S: The Role of Fibroblast Growth Factor (FGF) Signaling in Tissue Repair and Regeneration. *Cells*, 2021, 10(11):3242.
- [2] Pereira LV, Lotz S, Goderie S, Tokas N, Hirsch SE, Ahmad F, Corneo B, Le S, Banerjee A, Kane RS et al: Sustained Levels of FGF2 Maintain Undifferentiated Stem Cell Cultures with Biweekly Feeding. *PLoS ONE*, 2013, 8(2):e56289.
- [3] Prudovsky I: Cellular Mechanisms of FGF-Stimulated Tissue Repair. *Cells*, 2021, 10(7):1830.

For research use only, not for clinical diagnosis.

Version number: V1.1-202506

Service telephone +86-10-57815020

Service email custserv@transgenbiotech.com

