



## **Fibroblast Growth Factor 2 (FGF-basic) Human, E. coli Recombinant Protein (154 aa)**

### Product Data Sheet

Cat. No.:	A32180010	A32180050	A32181000
Size:	10 µg	50 µg	1 mg

#### **Description:**

Our bioactive *Fibroblast Growth Factor 2 (FGF-basic) Human, E. coli Recombinant Protein (154 aa)* is a single, non-glycosylated, polypeptide chain containing 154 amino acids and has a molecular mass of 17.2 kDa. The FGF-basic 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.

#### **Amino Acid Sequence:**

AAGSITTLPA LPEDGGSGAF PPGHFKDPKR LYCKNGGFFL RIHPDGRVDG VREKSDPHIK LQLQAEERGV  
VSIKGVCANR YLAMKEDGRL LASKCVTDEC FFFERLESNN YNTYRSRKYT SWYVALKRTG QYKLGSKTGP  
GQKAILFLPM SAKS.

#### **Other Names:**

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

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#### **Ilex Life Sciences LLC**

1465 Sand Hill Rd, Suite 2018, Candler, NC 28715

Tel: (828) 531-9949; Email: info@ilexlife.com

Web: <https://ilexlife.com/>

**Source:**

E. coli

**Purity:**

Greater than 98.0% as determined by Analysis by SDS-PAGE.

**Physical Appearance:**

Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:**

The protein was lyophilized from a concentrated (1 mg/ml) solution in 20mM Tris-HCl, pH7.4 and 1M NaCl.

**Reconstitution:**

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

**Biological Activity:**

The ED<sub>50</sub>, calculated by the dose-dependent proliferation of murine balb/c 3T3 cells is <0.1 ng/ml, corresponding to a specific activity of greater than 1.0x10<sup>7</sup> Units/mg.

**Shipping:**

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

**Stability:**

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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