

**Fibroblast Growth Factor-*Basic*: Human Recombinant**  
(Synonyms: Basic Fibroblast Growth Factor, FGF Basic, FGF-2, FGF2, FGF- $\beta$ )

Catalog Number:	1012-2E-FGFB
Product Specification:	Fibroblast Growth Factor- <i>Basic</i> (141-288: 147 aa), Human Recombinant
Species:	Human FGF: Leu142-Ser288, with an N-terminal Gly, Accession# NP_001997
Expression System	E. coli
Purity (by SDS-PAGE):	97%
Molecular Weight:	16.0 kDa Predicted, 17.0 by SDS-PAGE
Endotoxin Level:	<1.0 EU per 1 $\mu$ g of protein (by Limulus Amoebocyte Lysate Test)
Size:	<input type="checkbox"/> 50 $\mu$ g <input type="checkbox"/> 200 ug <input type="checkbox"/> 1 mg
Biological Activity:	ED <sub>50</sub> = 0.5 ng/ml in a cell proliferation assay using NIH/3T3 cells and 10 ng/ml heparin.
Applications:	WB, ELISA, Cell culture
Formulation:	Prepared in PBS (1 mg/mL), Filtered (0.22 $\mu$ m) & lyophilized.
Reconstitution:	Reconstitute at 10 ug/ml in sterile water/PBS containing at least 0.1% human or bovine serum albumin.
Storage:	Store lyophilized and reconstituted proteins at -20°C for Long Term and at 4°C for < 2weeks. Avoid repeated freezing/thawing cycles.

**Related Product(s):**

1012-1E-FGFA      Fibroblast Growth Factor-**Acidic** (19-155: 136 aa), Human, Recombinant (Synonyms: FGF Acidic, FGF-1, FGF1, ECGF, HBGF-1, FGFa)

## Background

FGF basic (bFGF/FGF-2/FGF2) is a member of the FGF family of at least 23 related mitogenic proteins which show 35 - 60% amino acid conservation. FGF acidic and basic, unlike the other members of the family, lack signal peptides and are apparently secreted by mechanisms other than the classical protein secretion pathway. FGF basic is produced by epithelial, tumor and other cell types (1). FGF basic protein (bFGF/FGF-2/FGF2) is involved in developmental processes and regulates differentiation, proliferation, and migration. FGF basic protein (bFGF/FGF-2/FGF2) is a critical factor for growing embryonic stem cells in culture without inducing differentiation. FGF basic protein (bFGF/FGF-2/FGF2) has a high affinity for heparan sulfate (2) and binding is a step in the FGF basic activation of FGFR tyrosine kinase. There are four distinct FGF receptors and each has multiple splice variants. FGF basic protein (bFGF/FGF-2/FGF2) binds with high affinity to many, but not all, FGFRs. Signaling cascades activated through FGF basic binding to FGFR include the ras-raf-MAPK, PLC $\gamma$ /PKC, and PI3K/AKT pathways.

## References:

1. Thomas, K.A. and Gimenez-Gallego, G. (1986) Trends Biochem. Sci. 11, 81.
2. Chen, C.H. et al. (2004) Curr. Vasc. Pharmacol. 2:33.
3. Rifkin, D. and Moscatelli, D. (1989) J. Cell Biol. 109, 1.

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