

Fibroblast Growth Factor-*Acidic*: Human Recombinant
(Synonyms: FGF Acidic, FGF-1, FGF1, ECGF, HBGF-1, FGFa)

Catalog Number:	1012-1E-FGFA
Product Specification:	Fibroblast Growth Factor- <i>Acidic</i> (19-155: 136 aa), Human Recombinant Protein
Species:	Human FGF (Leu18-Asp155, with an N-terminal Gly), Accession# NP_000791
Expression System	E. coli
Purity (by SDS-PAGE):	95%
Molecular Weight:	15.5 KDa (calculated)
Endotoxin Level:	<1.0 EU per 1µg of protein (by Limulus Amoebocyte Lysate Test)
Size:	<input type="checkbox"/> 50 µg <input type="checkbox"/> 200 ug <input type="checkbox"/> 1 mg
Biological Activity:	ED ₅₀ = 0.1 - 0.3 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 µm) & lyophilized.
Reconstitution:	Reconstitute at 10 ug/ml in sterile water 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):

1012-2E-FGFB Fibroblast Growth Factor-**Basic** (141-288: 147 aa), Human Recombinant (Synonyms: Basic Fibroblast Growth Factor, FGF Basic, FGF-2, FGF2, FGF-β)

Background

FGF acidic, also known as aFGF, FGF-1, FGF1, ECGF, and HBGF 1, is a 17 kDa nonglycosylated member of the FGF family of mitogenic peptides. FGF acidic protein (aFGF/FGF-1/FGF1) is a potent growth factor for fibroblasts and endothelial cells (1). FGF acidic protein (aFGF/FGF-1/FGF1) is involved in wound repair, angiogenesis, and development (1). FGF acidic protein (aFGF/FGF-1/FGF1) is secreted from cells via an endoplasmic reticulum/Golgi independent mechanism (1,2). The ability of FGF acidic protein (aFGF/FGF-1/FGF1) to bind to heparin sulfate is required for its ability to interact with FGF receptors and induce signaling (1-4). There are four distinct FGF receptors and each has multiple splice variants (1,3). FGF acidic protein (aFGF/FGF-1/FGF1) binds with high affinity to many, but not all, FGFRs (1). Signaling cascades activated through FGF basic binding to FGFR include the ras-raf-MAPK, PLC /PKC, and PI3K/Akt pathways (1).

References:

1. Powers, C.J. et al. (2000) *Endocr Relat Cancer* 7, 165-97.
2. Prudovsky, I. et al. (2003) *J Cell Sci* 116, 4871-81.
3. Ornitz, D.M. and Itoh, N. (2001) *Genome Biol* 2, REVIEWS3005.
4. Mohammadi, M. et al. (2005) *Curr Opin Struct Biol* 15, 506-16.

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