

# Acidic Fibroblast Growth Factor (aFGF)

✓ 100 µl  
(10 µg)

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New 03/08

This product is for *in vitro* research use only and is not intended for use in humans or animals.  
This product is not intended for use as a therapeutic or in diagnostic procedures.

Molecular Wt.	Source	Purity
17 kDa	Human Recombinant Protein expressed in <i>E. Coli</i>	>95%

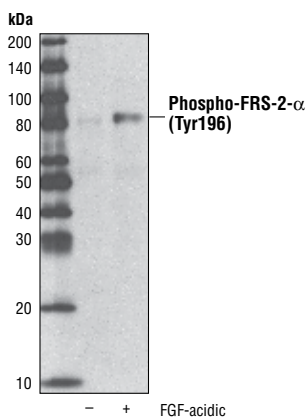
**Background:** Fibroblast growth factors are a family of broad-spectrum growth factors influencing a plethora of cellular activities. The interaction of at least 23 ligands, 4 receptors and multiple coreceptors provides a dramatic complexity to a signaling system capable of effecting a multitude of responses (1,2). Basic fibroblast growth factor (bFGF or FGF2), initially identified as a mitogen with prominent angiogenic properties, is now recognized as a multi-functional growth factor (3). It is clear that bFGF produces its biological effects in target cells by signaling through cell-surface FGF receptors. bFGF binds to all four FGF receptors. Ligand binding induces receptor dimerization and autophosphorylation, allowing binding and activation of cytoplasmic downstream target proteins, including FR, PLC and Crk (4,5). The FGF signaling pathway appears to play a significant role not only in normal cell growth regulation but also in tumor development and progression (6).

Acidic FGF (aFGF or FGF1) is another extensively investigated protein of FGF family. aFGF shares 55% DNA sequence homology with bFGF. These two growth factors are ubiquitously expressed and exhibit a wide spectrum of similar biological activities with quantitative differences likely due to variation in receptor affinity or binding (7).

**Source/Purification:** The human acidic-FGF coding cDNA was obtained from kidney mRNA, subcloned into an expression vector and expressed in *E. coli*. The recombinant human acidic FGF was purified and stored in PBS buffer containing 0.1% BSA.

**Concentration:** ED<sub>50</sub> for aFGF-stimulated NIH/3T3 cell proliferation assay is 0.1-0.4 ng/ml.

**Specific Activity:** Acidic FGF is supplied as a solution. It should be stored at -80°C. Aliquot the reagent upon receipt and avoid repeated freeze-thaw cycles. CST recommends using 50-100 ng/ml of aFGF for stimulation of aFGF signaling.



Western blot analysis of NIH/3T3 cell lysates untreated or stimulated with Acidic FGF (50 ng/ml for 10 min) using Phospho-FRS-2-α (Tyr196) Antibody (#3864).

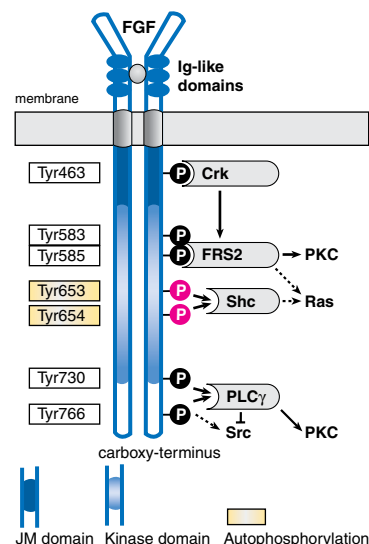
**Background References:**

- (1) Powers, C.J. et al. (2000) *Endocrine-Related Cancer* 7, 165-197.
- (2) Bansal, R. (2002) *Dev. Neurosci.* 24, 35-46.
- (3) Morrison, R.S. et al. (1994) *J. Neurooncol.* 18, 207-216.
- (4) Kouhara, H. et al. (1997) *Cell* 89, 693-702.
- (5) Mohammadi, M. et al. (1991) *Mol. Cell. Biol.* 11, 5068-5078.
- (6) Bikfalvi, A. (1995) *Eur. J. Cancer* 31A, 1101-1104.
- (7) Ledoux, D. et al. (1992) *Prog. Growth Factor Res.* 4, 107-120.

**Storage:** Store at -80°C. Aliquot the reagent upon receipt and avoid repeated freeze-thaw cycles.

**Companion Products:**

- Basic Fibroblast Growth Factor (bFGF) #9952
- Acidic FGF (11H11) Rabbit mAb #3139
- FGF Receptor 1 Antibody #3472
- FGF Receptor 3 (D2G7E) Rabbit mAb #3163
- Phospho-FGF Receptor 1 (Tyr766) (1E5) Rabbit mAb #2544
- Phospho-FGF Receptor (Tyr653/654) Antibody #3471
- Phospho-FGF Receptor (Tyr653/654) (55H2) Mouse mAb #3476
- Basic FGF (19A9) Rabbit mAb #3196
- Phospho-FRS2-α (Tyr436) Antibody #3861
- Phospho-FRS2-α (Tyr196) Antibody #3864



# Material Safety Data Sheet (MSDS) for Acidic Fibroblast Growth Factor

## I. Identification:

**Product name:** Acidic Fibroblast Growth Factor  
**Product Catalog:** 3118  
**Manufacturer Supplier:** Cell Signaling Technology  
 3 Trask Lane  
 Danvers, MA 01923 USA  
 978-867-2300 TEL  
 978-867-2400 FAX  
 978-578-6737 EMERGENCY TEL

## II. Composition/Information:

Ingredient	CAS#	Percent
Acidic Fibroblast Growth Factor, human recombinant	None	<0.1%
Phosphate buffered saline	None	>99.9%

## III. Hazard Identification:

**CAUTION:** This product contains material of human origin and is not for use in humans. To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been established.

No known OSHA hazards.

## IV. First Aid Measures:

**Inhalation:** If inhaled, remove to fresh air. If breathing is difficult, get medical attention.

**Ingestion:** If swallowed, wash out mouth with water provided person is conscious. Get medical attention.

**Skin exposure:** In case of contact, immediately wash skin with soap and water for at least 15 minutes. Remove contaminated clothing. Wash clothing before reuse.

**Eye exposure:** In case of contact with eyes, immediately flush eyes with water for at least 15 minutes. Get medical attention.

## V. Fire Fighting Measures:

**Flash Point:** Data not available.

**Autoignition Temperature:** Data not available.

**Explosion:** Data not available.

**Fire extinguishing media:** Water spray, dry chemical, alcohol foam, or carbon dioxide.

**Firefighting:** Wear protective clothing and self-contained breathing apparatus to prevent contact with skin and eyes. May emit toxic fumes under fire conditions.

**VI. Accidental Release Measures:** Wear appropriate personal protective equipment as indicated in Section VIII. Absorb spill with compatible absorbent material. Transfer to a closed chemical waste container for disposal. Wash spill site after material has been picked up for disposal.

## VII. Handling And Storage:

**Storage:** Store in tightly closed container at -80°C.

Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

## VIII. Exposure Controls/Personal:

**Ventilation System:** A system of local and/or general exhaust is recommended.

**Skin Protection:** Wear compatible chemical resistant gloves and protective clothing.

**Eye protection:** Wear protective safety glasses or chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

## IX. Physical And Chemical Properties

<b>Appearance:</b>	colorless liquid
<b>pH:</b>	data not available
<b>Melting Point:</b>	data not available
<b>Boiling Point:</b>	data not available
<b>Freezing Point:</b>	data not available
<b>Volatile Organic Compounds:</b>	data not available
<b>Solubility:</b>	data not available

## X. Stability and Reactivity:

**Stability:** Stable under normal conditions.

**Hazardous Decomposition:** Data not available.

## XI. Toxicological Information:

**Acute Effects:** Not established. May cause irritation inhaled, ingested or absorbed.

**Chronic Effects:** Not established. May be harmful if inhaled, ingested or absorbed.

**Potential Health Effects:** Not established.

**Inhalation:** May be harmful, may be irritating to mucous membranes and upper respiratory tract.

**Skin:** May be harmful if absorbed through skin. May cause skin irritation.

**Eyes:** May be harmful if absorbed through the eyes. May cause eye irritation.

**Ingestion:** May be harmful if swallowed.

To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been thoroughly investigated.

## XII. Ecological Information:

Data not available.

**XIII. Disposal Considerations:** Dispose of in accordance with federal, state, local environmental regulations.

## XIV. Transport Information:

**DOT: Proper Shipping Name:** None. This substance is considered non-hazardous for transport.

**IATA: Proper Shipping Name:** None. This substance is considered non-hazardous for air transport.

## XV. Regulatory Information:

**EU Regulations/Classifications/Labeling Information:** None.

**US Regulatory Information:** None.

## XVI. Other Information:

This compound is sold only for research use only. It is not for use in humans. To the best of our knowledge, this document is accurate. It is intended to serve as a guide for safe use of this product in a laboratory setting by experienced personnel. The burden of safe use of this material rests entirely with the user. Cell Signaling Technology, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product.