Sterile

#5234

Human FGF acidic (hFGF acidic)

- ☐ SC 10 µg (With Carrier)
- ☐ SF 10 µg (Carrier Free)
- ☐ LC 50 µg (With Carrier)
- ☐ LF 50 µg (Carrier Free)

Multi-milligram quantities available

New 07/10

Cell Signaling TECHNOLOGY®

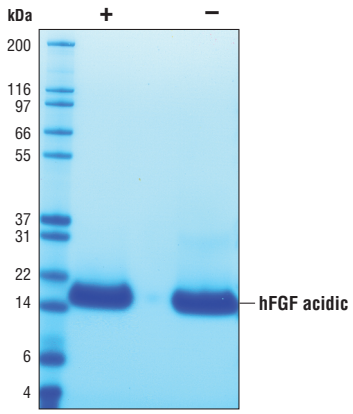
Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

Source: Recombinant human FGF acidic (hFGF acidic) Phe16-Asp155 (Accession #NP_000791) was produced in *E.coli* at Cell Signaling Technology.

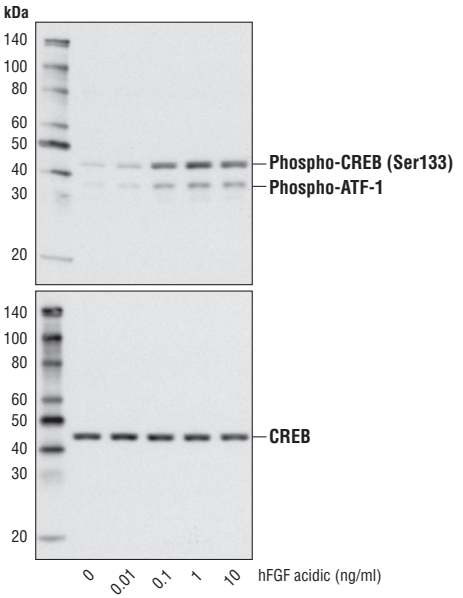
Molecular Characterization: Recombinant hFGF acidic does not have a Met on the amino terminus and has a calculated MW of 15,835. DTT-reduced and non-reduced protein migrate as 16 kDa polypeptides. The expected amino-terminal FNLPP of recombinant hFGF acidic was verified by amino acid sequencing.

Endotoxin: Less than 0.01 ng endotoxin/1 µg hFGF acidic.

Purity: >98% as determined by SDS-PAGE of 6 µg reduced (+) and non-reduced (-) recombinant hFGF acidic. All lots are greater than 98% pure.

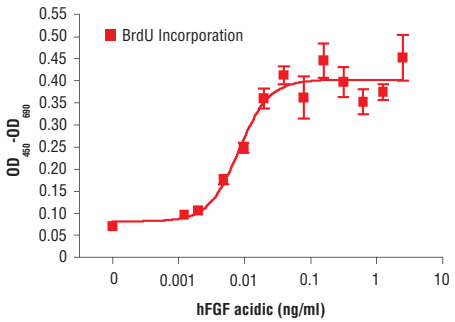


The purity of recombinant hFGF acidic was determined by SDS-PAGE of 6 µg reduced (+) and non-reduced (-) recombinant hFGF acidic and staining overnight with Coomassie Blue.



Western blot analysis of extracts from NIH/3T3 cells untreated or treated with human FGF acidic for 10 minutes, using Phospho-CREB (Ser133) Antibody #9191 (upper) or CREB Antibody #9192 (lower).

Bioactivity: The bioactivity of recombinant hFGF acidic was determined in a NIH/3T3 cell proliferation assay. The ED_{50} of each lot is between 7-20 pg/ml.



The proliferation of NIH/3T3 cells treated with increasing concentrations of hFGF acidic was assessed in the presence of 10 µg/ml heparin. After 24 hr treatment, cells were labeled with BrdU for 4 hrs. BrdU incorporation was determined by ELISA and the OD_{450}-OD_{690} was determined.

Formulation: With carrier: Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.2 containing 20 µg BSA per 1 µg hFGF acidic.

Carrier free: Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.2.

Reconstitution:
With carrier: Add sterile PBS or PBS containing 1% bovine or human serum albumin or 5-10% FBS to a final hFGF acidic concentration of greater than 50 µg/ml. Solubilize for 30 minutes at room temperature with occasional gentle vortexing.

Carrier free: Add sterile PBS or PBS containing protein to minimize absorption of hFGF acidic to surfaces. Solubilize for 30 minutes at room temperature with occasional gentle vortexing. Stock hFGF acidic should be greater than 50 µg/ml.

Storage: Stable in lyophilized state at 4°C for 1 year after receipt. Sterile stock solutions reconstituted with carrier protein are stable at 4°C for 2 months and at -20°C for 6 months. Avoid repeated freeze-thaw cycles.

Maintain sterility. Storage at -20°C should be in a manual defrost freezer.

Applications: Optimal concentration for the desired application should be determined by the user.

Background: FGF acidic is a potent growth factor for fibroblasts and endothelial cells (1). FGF acidic is involved in wound repair, angiogenesis, and development (1). FGF acidic is secreted from cells via an endoplasmic reticulum/Golgi independent mechanism (1,2). The ability of FGF acidic 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 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, PLCγ/PKC, and PI3K/Akt pathways (1).

Background 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.

#5234 MSDS

Material Safety Data Sheet (MSDS) for Human FGF acidic (hFGF acidic)

Cell Signaling TECHNOLOGY®

I. Identification:

Product name: Human FGF acidic (hFGF acidic)
Product Catalog: 5234
CAS#: None
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. Hazard Identification:

CAUTION: This product is not for use in humans. It is intended for research purposes only. To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been established.

EMERGENCY OVERVIEW: OSHA: No known hazards. This substance is not classified as dangerous according to Directive 67/548/EEC.

III. Composition/Information:

Substance Name: Fibroblast Growth Factor Acidic, mouse, recombinant, from E.coli

Synonyms: hFGF acidic

CAS#: None

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. Sweep up material and avoid raising dust. Transfer to a closed chemical waste container for disposal. Wash spill site after material has been picked up for disposal.

VII. Handling And Storage:

Store in tightly closed container at 4°C. Avoid inhalation. 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

Appearance:	lyophilized powder
pH:	7.2
Melting Point:	data not available
Boiling Point:	data not available
Flash Point:	data not available
Freezing Point:	data not available
Volatile Organic Compounds:	data not available
Solubility in water:	soluble in water

X. Stability and Reactivity:

Stability: Stable under normal conditions.
Materials to avoid: Strong oxidizing agents.
Hazardous Decomposition: Data not available.

XI. Toxicological Information:

Acute Effects: Not established.
Chronic Effects: Not established.

Potential Health Effects: Not established.
Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.
Skin: May be harmful if absorbed through skin. Causes skin irritation.
Eyes: Causes eye irritation.
Ingestion: May be harmful if swallowed.

XII. Ecological Information: No data available.

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

XIV. Transport Information:

DOT: Not dangerous goods.
ADR/RID: Not dangerous goods.
IMDG: Not dangerous goods.
IATA : Not dangerous goods.

XV. Regulatory Information:

EU Regulations/Classifications/Labeling Information: None.
US Regulatory Information:
SARA Listed: No.
Canada (WHMIS): DSL No, NDSL No.

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.