



## Product Specification Sheet for Growth Media Supplement

**Product Identifier:** Ento-F Bovine FGF2 Enriched Growth Media Supplement      **Source:** Recombinant, insect-derived  
**Lot:** Ento-F017      **Expiration Date:** Reconstituted product can be stored at -80°C for 1 year

### Product Highlights:

Produced by the EntoEngine™ process, the Future Fields *Ento-F FGF2 Enriched Growth Media Supplement* comes in a 1000X concentrate, containing enough FGF2 to sustain cell culture in two and three dimensions with cross species performance equivalent or better than expensive, overpurified alternatives. Usable as a direct replacement for FGF2 growth factor needs, or to reduce overall requirements for serum, the *Ento-F FGF2 Enriched Growth Media Supplement* is the most cost effective and sustainable option for cell culture FGF needs on the market today.

- High bioactivity across species
- Non-mammalian origin
- Low-risk expression platform with food-safe production capability
- Production requires minimal water, energy, and waste treatment

### Description of Growth Factor Component:

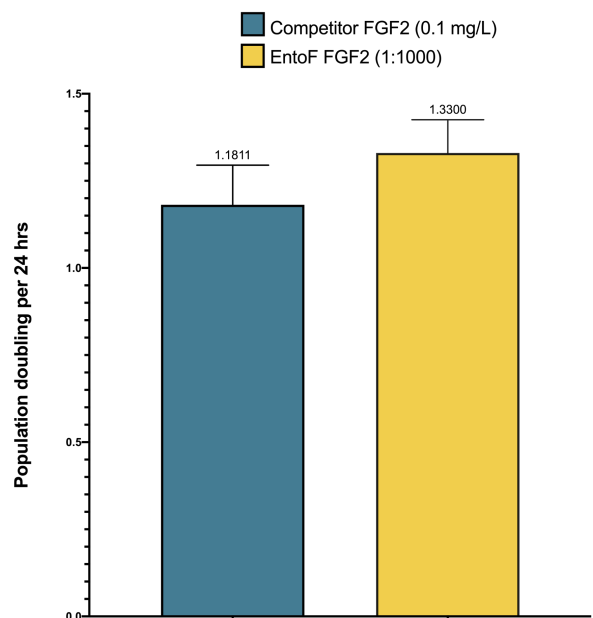
**Synonyms:** Basic Fibroblast Growth Factor, bFGF, FGF2

**Description:** FGF2 is a member of the FGF family (one of 23). It is a bioactive protein intended for use in cell culture applications. Members of this protein family bind heparin and possess broad mitogenic and angiogenic activities. They play a central role in the regeneration of a variety of tissues, promoting cellular proliferation in culture. The mRNA for FGF2 contains multiple polyadenylation sites, and is alternatively translated from AUG and non-AUG (CUG) initiation codons resulting in five unique isoforms with distinct properties. Recombinant Bovine FGF2 produced is a single, non-glycosylated, polypeptide chain containing 158 amino acids and having a molecular mass of 17.3 kDa. The Fibroblast Growth Factor 2 is purified by proprietary chromatographic techniques and other various purification techniques.

**Sequence (monomer):**

MAAGSITTLPALPEDGGSGAFPPGHFKDPKRLYCKNGGFFLRHPDGRVDGVREKSDPHIKLQLQAERGVVSIKGVCANRYLAMKEDG  
RLASKCVTDECFERLESNNYNTYRSRKYSSWYVALKRTGQYKLGPKTGPGQKAILFLPMSAKS

### C2C12 cells



## Storage & Handling:

**Handling:** Store lyophilized protein at 2-8°C.

**Reconstitution:** For immediate use, reconstitute each vial in 5.0 mL ultrapure water (i.e. Milli-Q water). Pipette to mix. Do not vortex. For extended storage, reconstitute in 5.0 mL ultrapure water with 10% glycerol.

**Extended Storage:** Aliquot before extended storage. Store at -80°C. For frozen reconstituted aliquots, thaw on ice or at room temperature. Do not heat to thaw. Keep on ice while using.

**Storage/Stability:** Store filter-sterilized working aliquots in media at 2-8°C for 1 week or less.

## Specifications:

**Formulation:** Protein stored in 50 mM Tris pH 7, 150 mM NaCl, and 2 mM EDTA.

**Authenticity:** Verified by western blot and ELISA.

**Concentration:** Ideal working concentration for your unique cell line should be determined by a dose curve.

Recommended starting range: 1:500 to 1:3000 dilution.

**Biological Activity:** Lot 017 was tested at a 1:1000 dilution in culture. 1) Determined by proliferation assays with C2C12 immortalized myoblast cell line (Alamar Blue analysis). 2) Determined by FGF2R2/3 pathway activation of MEK/ERK via phosphorylation (ELISA analysis) with C2C12 immortalized myoblast cell line.

**Endotoxin:** Unknown. Analysis is ongoing.

**Protein Content:** Verified by SDS-PAGE, ELISA, and UV spectroscopy.

## Usage and Special Instructions

**Usage:** For research only. Not for diagnostic or therapeutic use.

**Addition to Media:** Protein supplement is non-sterile. Immediately filter-sterilize media after the addition of recombinant protein using 0.2 µm filter.

**Supplemented Media Use:** Allow supplemented media to equilibrate to room temperature. Do not heat media at 37°C prior to use. Media should be changed or supplemented with product every 1-2 days. Protein supplemented media can be stored at 2-8°C for up to 1 week.