Growth Factors

Recombinant FGF-2 TOP®

(*Theremostability Optimized*)

Thermostable Basic Fibroblast Growth Factor

50µg
1000 µg

customers@corebiogenesis.com

More info and related products at
www.corebiogenesis.com

Product Description

FGF-2-TOP® (Thermostability Optimized) -formerly STAB- is a stabilized growth factor that offers a novel way to grow FGF-2-dependent cell cultures more efficiently, with fewer media changes. FGF2-TOP® retains full biological activity even after seven days at 37°C. The stable levels of FGF-2 in culture allows for a more homogenous, undifferentiated stem cell culture, while saving researchers valuable time and money because repeated supplementation with FGF-2 and a daily medium change is not required. **Core Biogenesis FGF-2 TOP® is the 155 aa mature domain of FGF-2** with nine amino acid substitutions to enhance stability without impacting bioactivity developed by Dvorak et al. 2018. This increases the functional half-life of the protein from <10 h (wild-type) to >7 days (FGF2-TOP®) in cell culture conditions at 37°C.

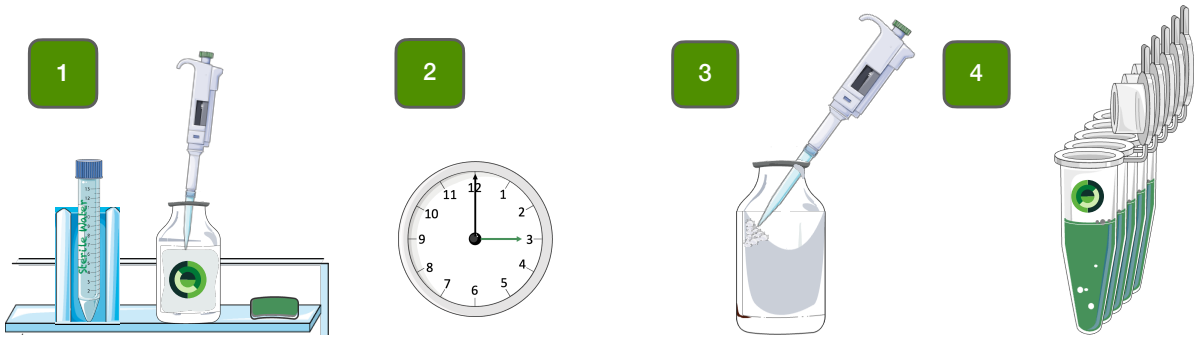
Product Information

Alternative Names:	FGF-2 G3, bFGF STAB, Thermostable FGF-2.
Amino Acid Sequence:	155 amino acids with 9 aa point mutations from the wild-type FGF-2. Tag-free. Original sequence accession number: P09038
Molecular mass:	Estimated 17.4 kDA.
Origin:	Plant-derived.
Species:	Engineered sequence.
Similarity:	Species neutral. Reactivity with Human, Bovine, Porcine and Mouse.

Product Specifications

Purity:	≥ 95% measured by SDS page resolved under reduced (R) conditions.
Bioactivity:	The specific activity corresponds to generally EC5O ≤ 1 ng/ml. Determined by the ability to promote the proliferation of NIH/3T3 cells cultured in adherent condition.
Formulation:	Solution in PBS or Lyophilized.
Endotoxin level:	Recombinant protein expressed in plant system, free of bacterial endotoxins.
Animal Component:	Animal-derived Component Free. Core Biogenesis strictly guarantees that our recombinant proteins are not produced with or contain any components of animal origin.

Product Use & Storage



Add Dilution Buffer
Let the protein thaw and reconstitute in sterile water for injection or PBS to at least 0.1mg/mL to allow for maximum protein recovery

Wait
Allow your protein to fully dissolve and get reconstituted for 5 to 10´ at room temperature.

Mix
Gently resuspend by injecting up and down 10 times the content from the vial. Avoid foaming and do not vortex.

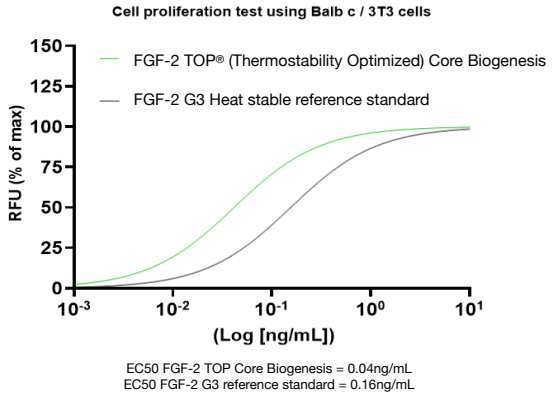
Aliquot
Prepare single use aliquots in tubes. Be sure to label your aliquots with the growth factor type, lot and date.

Protein is stable as supplied at -20 ° C to -80°C

Reconstituted protein can be conserved frozen at -20° or -80°C. *See batch documentation for specific expiration date.

Product Data

Bioactivity



EC50 FGF-2 TOP Core Biogenesis = 0.04ng/mL
EC50 FGF-2 G3 reference standard = 0.16ng/mL

Comparison of FGF2-TOP® from Core Biogenesis (plant-expressed) with human FGF-2 STAB (G3) reference standard (*e.coli* expressed) revealed that after 5 days of culturing 3T3 at 37°C, cell proliferation FGF2-TOP® from Core Biogenesis is higher than the reference standard. FGF2-TOP® from Core Biogenesis exhibited an EC50 value of 0.04ng/mL as compared to the *e.coli* derived product, corresponding to EC50 0.16ng/mL. Results indicate the thermal stability promoting high bioactivity after several days in culture without media change.

SDS-PAGE

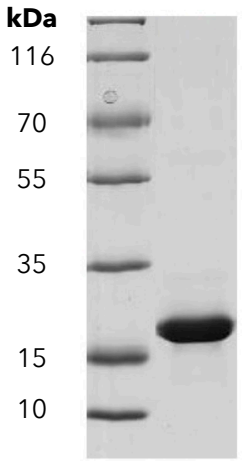


Image of SDS-PAGE gel showing purity of isolated FGF2-TOP®. Protein marker: 116, 66, 45, 35, 25, 18, 14 kDa.