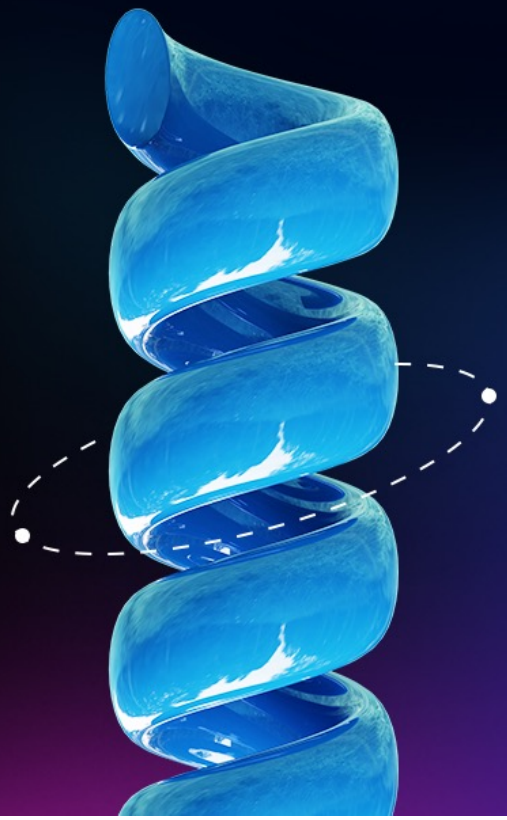
bio-techne®

Redefining Industry Standards

WITH NEXT GENERATION FGF basic



Renowned R&D Systems™ quality with Bio-Techne Innovation

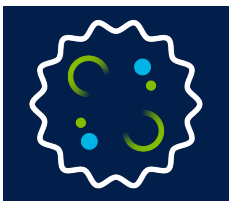
For almost 40 years, R&D Systems™, a Bio-Techne brand, has strived to offer high quality proteins to enable your scientific research. Over the years, we continuously improve by incorporating scientific advancements in protein purification and cell culture.

Rather than just meeting industry standards, we're on a mission to define them. Our modernized methods safeguard your access to high-quality recombinant proteins throughout your research journey.

Our **next generation** of cytokines and growth factors merges our renowned quality and innovation, offering you an unparalleled combination of dependability and stability of supply. These best-in-class proteins ensure your research remains at the forefront of progress. Consider our **Next Generation FGF basic** (Catalog # 3718-FB) and explore the key benefits!

Key Benefits of Our Next Generation FGF basic Protein

Increased Supply: Improved manufacturing processes allow for greater scalability & robust supply chain.



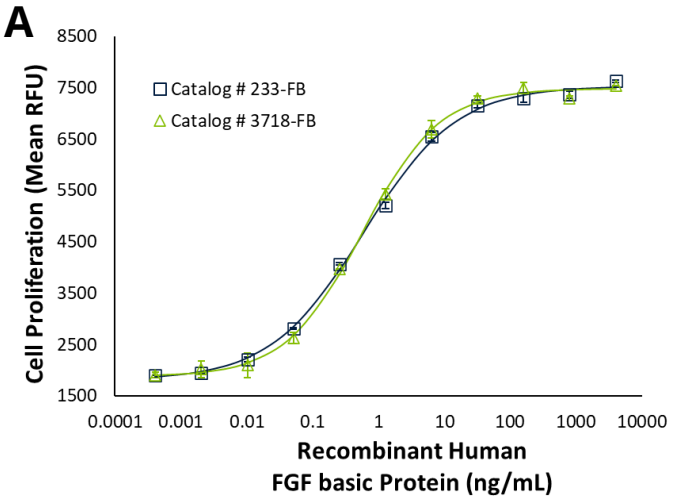
Same Source: Our legacy and next generation proteins are derived from the same *E. coli* expression system.

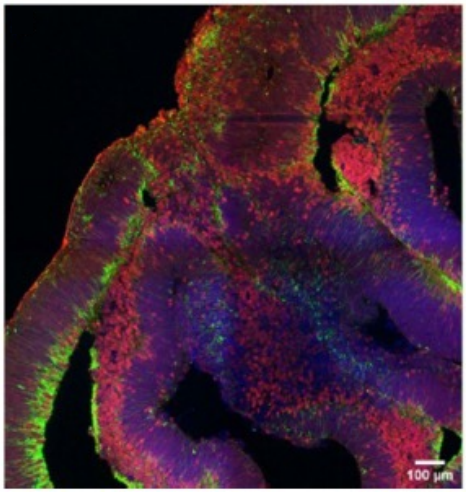
Time & Cost-Savings: Cost-effective proteins with larger lot sizes, allowing for less time spent on bridging studies.

Equivalent Bioactivity: Our next generation FGF basic protein displays the same activity as our legacy protein.

Learn more | bio-techne.com/proteins/reagents/nextgenerationproteins

Figure 1: Analysis of Next Generation FGF basic Protein Bioactivity





New Recombinant Human FGF basic Protein Activity. (A) Equivalent bioactivity of new E.coli-derived RUO (Catalog # 3718-FB) and Original (Catalog # 233-FB) Recombinant Human FGF basic as measured in a cell proliferation assay using NR6R-3T3 mouse fibroblast cells (orange, green, respectively).

(B) iPSC-derived cerebral organoids (day 45) were cultured using Cultrex UltiMatrix RGF Basement Membrane Extract (Catalog # BME001-05) and brain organoid culture medium, which includes Recombinant Human FGF-basic (Catalog # 3718-FB) and Recombinant Human Noggin (Catalog # 6057-NG), along with the other reagents listed in the brain organoid culture recipe. Cerebral organoids were stained for Syto6 (blue), Pax6 (red), and Vimentin (green). Image taken at 15x magnification. Image courtesy of LifeCanvas Technologies.

Table: Comparison of Legacy and Next Generation Recombinant Human FGF basic Proteins

Specifications	233 FB (Legacy)	3718 FB (Next Generation)
Activity	Measured in a cell proliferation assay using NR6R-3T3 mouse fibroblast cells. Raines, E.W. et al. (1985) Methods Enzymol. 109:749. The ED_{50} for this effect is 0.1-0.6 ng/mL.	Measured in a cell proliferation assay using NR6R-3T3 mouse fibroblast cells. Raines, E.W. et al. (1985) Methods Enzymol. 109:749. The ED_{50} for this effect is 0.1-0.6 ng/mL.
Source	*E. coli*-derived human FGF basic/FGF2/bFGF protein Pro143-Ser288, with an N-terminal Ala	*E. coli*-derived human FGF basic/FGF2/bFGF protein Ala144-Ser288
Purity	>97%, by SDS-PAGE	>95%, by SDS-PAGE
N-terminal Sequence	Ala-Pro143	Ala144
Predicted Molecular Mass	16.5 kDa	16 kDa
Pack Sizes	10, 500 µg, 1 mg	10, 25, 100 µg, 1 mg
Formulation	Lyophilized from a 0.2 µm filtered solution in Tris-HCl and NaCl.	Lyophilized from a 0.2 µm filtered solution in Tris-HCl and NaCl.
Endotoxin	<0.10 EU per 1 µg of the protein by the LAL method.	<0.01 EU per 1 µg of the protein by the LAL method.

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