

## Food grade serum-free media optimization growth factor discovery kit (Qk505-FG)



**Type:** Food grade discovery kits

**Available for purchase:** Qk505-FG: Food grade serum-free media kit

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### Product Information

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For rapid optimization of cell culture media to become entirely serum-free.

Serum-free media offers a defined and controlled environment for cell culture, minimizing variability and contamination risks associated with traditional serum-containing media. Serum-free media enhances reproducibility and reliability in experimental results, while aligning with ethical considerations and animal welfare principles. The use of serum-free media also reduces the likelihood of introducing adventitious contaminants, such as viruses and mycoplasma, into cell cultures. Serum-free media is particularly valuable in cellular agriculture and translational and clinical research, ensuring compliance with regulatory standards for safety and quality in cell-based therapies and tissue engineering applications.

The serum-free media optimization growth factor discovery kit contains 7 growth factors which are commonly used in a variety of serum-free media. Use this kit to optimize media for your cells to fully define your media.

### Product Information

- High quality food grade proteins
- >98%, by SDS-PAGE quantitative densitometry
- Animal origin-free (AOF) and carrier protein-free
- Expressed in *E. coli*
- Bioactivity Guaranteed

- Manufactured in the UK under a food manufacturing HACCP regime
- Lyophilized

### **Reconstitution instructions**

- Discovery kits

### **Featured applications**

- Serum-free media development
- Cellular agriculture and cultivated meat cell culture media optimization

### **Further quality assays**

- Mass spectrometry: single species with expected mass
- Recovery from stock vial: >95%
- Endotoxin: <0.05 EU/μg protein
- Full raw materials traceability, allergen analysis, CoO, CoA, beta-lactam-free and animal origin-free certification available

## Scientific Information

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### Bioactivity

#### **Bovine/porcine FGF2-G3 (154 aa)** - Qk081-FG - **100 µg**

A thermostable engineered form of bovine/porcine FGF-2. The functional half-life has increased from <10 h (wild-type) to >7 days (FGF2-G3).

#### **Bovine/porcine FGF-2 (154 aa)** - Qk056-FG - **50 µg**

Full-length FGF-2 protein used to support the maintenance of bovine/porcine embryonic stem cells and proliferation and differentiation of induced pluripotent and mesenchymal stem cells. This 154 aa form of FGF-2 comprises the core structured region and N-terminal extension.

#### **Bovine/porcine activin A** - Qk108-FG - **50 µg**

Regulates embryonic development, cell proliferation, differentiation, and immune responses. Activin A is frequently used to maintain pluripotency in induced pluripotent and embryonic stem cell cultures.

#### **Bovine/porcine TGF-β1 PLUS** - Qk111-FG - **25 µg**

Regulates various cellular processes, including cell proliferation, growth, differentiation, motility, and apoptosis. It is an essential growth factor in many embryonic and induced pluripotent stem cell maintenance media, including the commonly used E8, StemPro, and mTeSR media.

#### **Bovine/porcine TGF-β2** - Qk0112-FG - **50 µg**

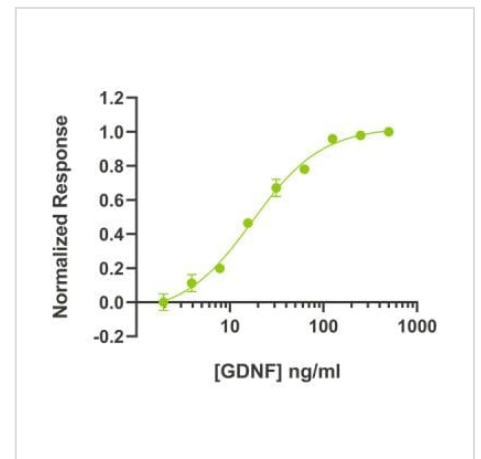
Regulates a wide array of cellular processes, including proliferation, differentiation, wound healing, apoptosis, metabolism, embryogenesis, and tissue repair. It is an essential growth factor in many embryonic and induced pluripotent stem cell culture media.

#### **Porcine TGF-β3** - Qk084-FG - **25 µg**

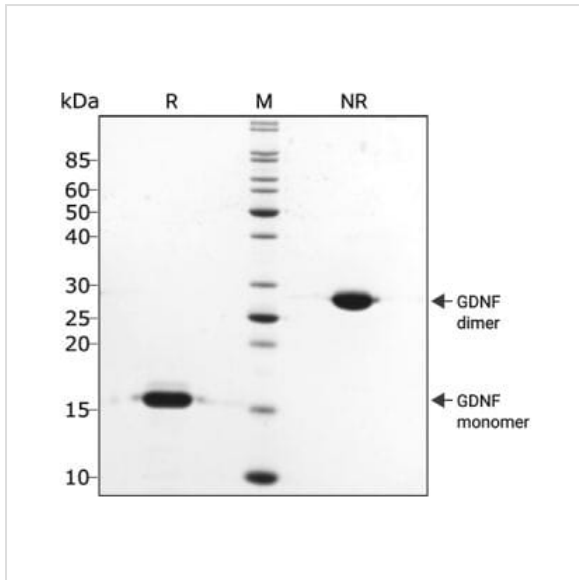
A member of the TGF beta family, involved in regulating cell survival, proliferation and differentiation. TGF-β3 is used in pluripotent stem cell maintenance medias, such as B8 media.

#### **Bovine/porcine IGF-1 LR3 (insulin-like growth factor long arginine 3)** - Qk114-FG - **500 µg**

A synthetic analog of IGF-1. The substitutions include an arginine substitution and an N-terminal protein extension. Consequently, IGF-1 LR3 has improved biological potency and extended half-life.



### Purity



**Original product page:** <https://ryan.calliope-alpha.ts.net/product/food-grade-serum-free-media-optimization-discovery-kit-qk505-fg/>

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