

Recombinant bovine/porcine TGF- β 1 PLUS™ protein (Qk111-FG)



Type: Food grade proteins

Available for purchase: Unit Size (μ g): 25, 50, 100, 500, 1000

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Product Information

Transforming growth factor-beta 1 (TGF- β 1) is an essential growth factor in many embryonic and induced pluripotent stem cell maintenance media, including the commonly used E8, StemPro, and mTeSR media. TGF- β 1 also promotes the differentiation of various cell types such as fibroblasts, epithelial cells, and immune cells.

High quality food grade bovine/porcine recombinant TGF- β 1 PLUS™ protein is the first entirely animal origin-free recombinant TGF- β 1 protein for highly reproducible results and compatible with chemically-defined stem cell media and cultivated meat applications.

TGF- β 1 PLUS™ is a high purity 24 kDa dimer comprising optimized mature domain of TGF- β 1 protein.

Alternative protein names

Transforming growth factor-beta 1, TGF-beta 1, TGF beta 1, TGF β 1, TGF β 1, TGF B1

Molecular weight

24 kDa (dimer)

Protein Uniprot number

High purity optimized bovine/porcine TGF- β 1 protein (Uniprot: P18341)

Species reactivity

- bovine
- porcine

Product Information

- High quality food grade recombinant protein
- >98%, by SDS-PAGE quantitative densitometry
- Expressed in *E. coli*
- Animal origin-free (AOF) and carrier protein-free
- Manufactured in the UK under a food manufacturing HACCP regime
- Lyophilized from acetonitrile, TFA

Reconstitution instructions

- Resuspend in 10 mM HCl (Reconstitution solution A) at >50 µg/ml

Featured applications

- Bovine and porcine stem cell expansion and maintenance
- Cellular agriculture and cultivated meat cell culture media optimization
- Serum-free media development

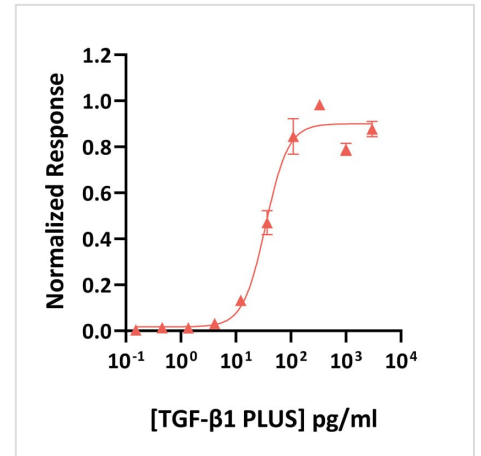
Further quality assays

- 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

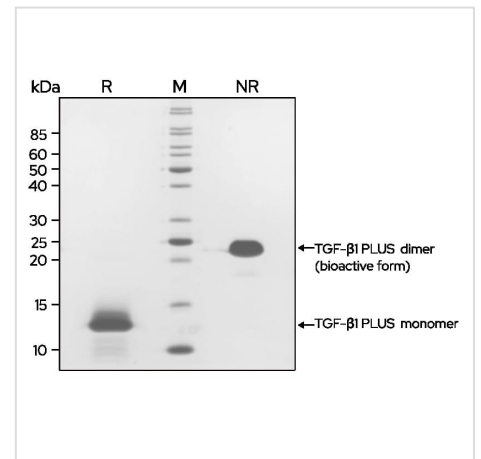
Bioactivity

TGF- β 1 PLUS™ activity was determined using the firefly luciferase reporter assay in transiently transfected HEK293T cells. Cells were treated in triplicate with a serial dilution of TGF- β 1 PLUS™. Firefly luciferase activity was measured and normalized. EC50 = 34.8 pg/ml. Data from Qk010 lot #011.



Purity

TGF- β 1 PLUS™ dimer migrates as a single band at 24 kDa in non-reducing (NR) and 13 kDa as a single monomeric species upon reduction (R). High purity yield of dimeric protein (bio active form). Purified recombinant protein (7 μ g) was resolved using 15% w/v SDS-PAGE in reduced (+ β -mercaptoethanol, R) and non-reduced conditions (NR) and stained with Coomassie Brilliant Blue R250. Data from Qk010 lot #012.



Original product page: <https://ryan.calliope-alpha.ts.net/product/recombinant-bovine-porcine-tgf-%ce%b21-plus-protein-qk111-fg/>

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