

## Recombinant porcine TGF- $\beta$ 3 protein (Qk084)



**Type:** Stem cells

**Available for purchase:** Unit Size ( $\mu$ g): 25, 50, 100, 500, 1000

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### Product Information

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Porcine TGF beta 3 protein is a member of the [transforming growth factor family](#), a family involved in regulating cell survival, proliferation and differentiation. Qkine is dedicated to supporting the [cellular agriculture](#) industry by manufacturing high-purity and bioactive growth factors that are species-specific to cultivated cultures. Porcine TGF- $\beta$ 3 is used in cultivated meat pluripotent stem cell maintenance medias, such as [Beefy9 media](#).

Porcine TGF beta 3 is a protein dimer that is [animal-origin free](#) (AOF) and carrier-protein free (CF).

#### Alternative protein names

Transforming growth factor beta-3, TGF-b3, TGFB3, TGF B3, Prepro-transforming growth factor beta-3, Arrhythmogenic right ventricular dysplasia 1 (ARVD, ARVD1), Qk84

#### Molecular weight

25 kDa (dimer)

#### Protein Uniprot number

Highly pure porcine protein (UniProt number: P15203)

#### Species reactivity

- porcine

## **Product Information**

- >98%, by SDS-PAGE quantitative densitometry
- Expressed in *E. coli*
- Animal origin-free (AOF) and carrier protein-free
- Manufactured in our Cambridge, UK laboratories
- Lyophilized from acetonitrile, TFA

## **Reconstitution instructions**

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

## **Featured applications**

- Induced pluripotent and embryonic stem cell differentiation and maintenance
- iPSC-derived mesoderm differentiation
- Culture of porcine (pig) muscle stem cells
- Induction of cell migration, proliferation and extracellular matrix production
- Cellular agriculture and cultivated meat cell culture media optimization
- Inclusion in cultivated meat media

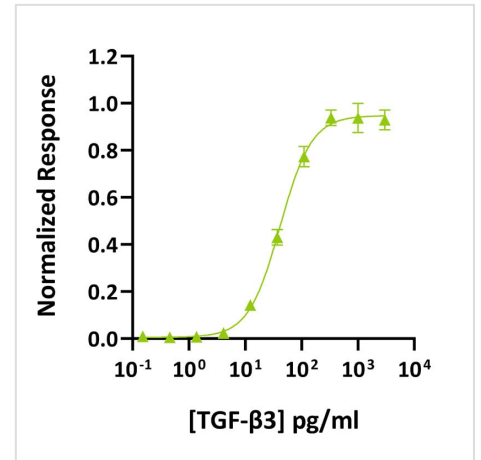
## **Further quality assays**

- Mass spectrometry: single species with expected mass
- Recovery from stock vial: >95%
- Endotoxin: <0.05 EU/µg protein

## Scientific Information

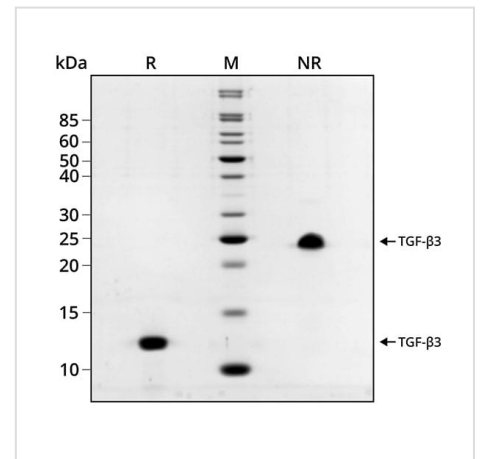
### Bioactivity

Recombinant porcine TGF- $\beta$ 3 activity was determined using a TGF- $\beta$ 3-responsive luciferase assay. Transfected HEK293 cells were treated in triplicate with a serial dilution of porcine TGF- $\beta$ 3 for 6 hours. Firefly activity was measured and normalised to the control Renilla luciferase activity. Data from Qk084 lot 204635. EC50 = 41 pg/ml (1.6 pM)



### Purity

Recombinant porcine TGF- $\beta$ 3 migrates at approximately 12.6 kDa (monomer) in reduced (R) and at approximately 25 kDa (dimer) in non-reduced (NR) conditions. No contaminating protein bands are present. The purified recombinant protein (3  $\mu$ g) was resolved using 15% w/v SDS-PAGE in reduced (+ $\beta$ -mercaptoethanol, R) and non-reduced (NR) conditions and stained with Coomassie Brilliant Blue R250. Data from Qk084 lot #204635.



**Original product page:** <https://ryan.calliope-alpha.ts.net/product/recombinant-porcine-tgf-b3-protein-qk084/>

**PDF generated:** 12 May 2026

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