

## Recombinant human TGF- $\beta$ 3 protein (Qk054)



**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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Human transforming growth factor beta 3 (TGF- $\beta$ 3) protein is a member of the [TGF- \$\beta\$  family](#), a family involved in regulating cell survival, proliferation and differentiation. TGF- $\beta$ 3 is used in human [pluripotent](#) stem cell maintenance media.

Qkine TGF- $\beta$ 3 is a highly pure and bioactive 25.4 kDa protein dimer. Qkine growth factors are [animal-origin free](#) (AOF) and carrier-protein free (CF) for reproducible results.

**Qkine TGF- $\beta$ 3 is also available as [cell therapy grade](#) with extended quality testing and documentation - [Qk054-CTG](#)**

#### 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), Qk54

#### Molecular weight

12.7 kDa (monomer) 25.4 kDa (dimer)

#### Protein Uniprot number

High purity human TGF- $\beta$ 3 (Uniprot: P10600)

#### Species reactivity

- human
- species similarity:
- mouse - 100%

- rat - 99%
- bovine - 99%
- porcine - 98%

### **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**

- Stem cell expansion and maintenance
- Induced pluripotent and embryonic stem cell differentiation and maintenance
- iPSC-derived mesoderm differentiation

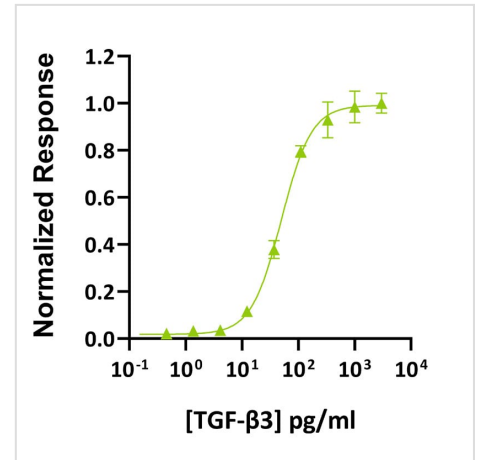
### **Further quality assays**

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

## Scientific Information

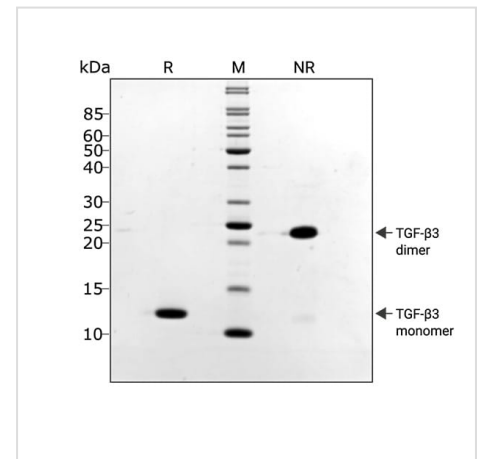
### Bioactivity

TGF- $\beta$ 3 activity was determined using a TGF- $\beta$ 3 responsive firefly luciferase reporter in HEK293T cells. EC50 = 50 pg/ml. Bioactivity was determined using a TGF- $\beta$ 3 responsive firefly luciferase reporter in HEK293T cells. Cells were treated (in triplicate) with a serial dilution of TGF- $\beta$ 3 for 6 hours. Firefly luciferase activity was measured and normalized to the control Renilla luciferase activity. Data from Qk054 batch #104369.



### Purity

TGF- $\beta$ 3 migrates as a single band at 25 kDa in non-reducing (NR) conditions and 13 kDa upon reduction (R). No contaminating protein bands are visible. 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 Qk054 batch #104369.



**Original product page:** <https://ryan.calliope-alpha.ts.net/product/recombinant-human-tgf-b3-protein-qk054/>

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