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Recombinant FGF2-G3 (154 aa) protein (Qk053)



Type: Stem cells

Available for purchase: Unit Size (µg): 25, 50, 100, 500, 1000, 4000

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Product Information

Recombinant FGF2-G3 (FGF2-STAB®) protein is a thermostable engineered form of FGF-2 (bFGF). Qk053 is the 154 aa mature domain of FGF-2 (Qk027) with nine amino acid substitutions to enhance stability without impacting bioactivity developed by Dvorak et al. 2018. This increases the functional half-life of the protein from <10 h (wild-type) to >7 days (FGF2-G3).

Recombinant FGF2-G3 is used in B8 media (Kuo et al. 2019) for weekend free, high homogeneity induced pluripotent stem cell culture. FGF2-G3 also has applications in chemically defined stem cell and organoid culture media, and cultured meat media development.

High purity 17 kDa bioactive FGF2-G3 protein, animal origin-free (AOF), carrier protein-free and tag free.

This protein is also available as GMP compliant Cell Therapy Grade, to enquire email support@qkine.com.

Alternative protein names

Basic fibroblast growth factor, bFGF, FGF-β, FGF2, Fibroblast growth factor-basic, HBGF-2, FGF2-G3, FGF2-STAB, FGF2-STAB2, FGF 2, Qk53

Molecular weight

17 kDa

Protein Uniprot number

High purity thermostable recombinant FGF2-G3 protein comprising 154 aa form of FGF-2 (Uniprot: P09038) with nine stabilizing amino acid substitutions

Species reactivity

- species neutral

Product Information

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

Reconstitution instructions

- Resuspend in sterile-filtered water at >50 µg/ml

Featured applications

- Expansion of induced pluripotent, embryonic and mesenchymal stem cells

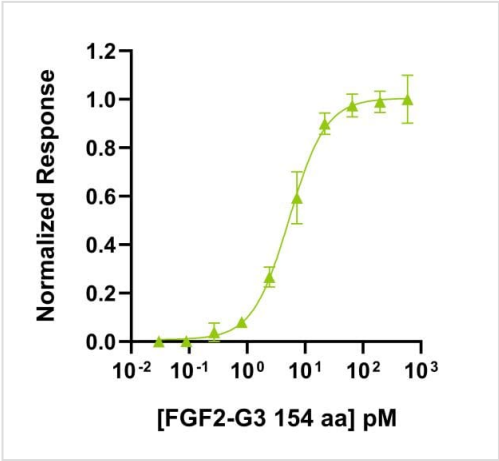
Further quality assays

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

Scientific Information

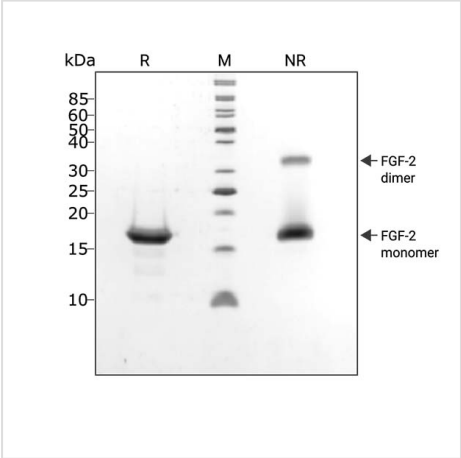
Bioactivity

Recombinant FGF2-G3 activity was determined using the Promega serum response element luciferase reporter assay in transfected HEK293T cells. EC50 = 90 pg/ml (5.2 pM). Cells were treated in triplicate with a serial dilution of FGF2-G3 for 3 hours. Firefly luciferase activity was measured and normalized to the control Renilla luciferase activity. Data from Qk053 lot #104340.



Purity

Recombinant FGF2-G3 migrates as a major band at 17 kDa in non-reducing (NR) conditions. The higher molecular weight minor band is the dimeric form. Upon reduction (R), only the 17 kDa band is visible. No contaminating protein bands are present. Purified recombinant protein (3 µg) was resolved using 15% w/v SDS-PAGE in reduced (+β-mercaptothanol, R) and non-reduced (NR) conditions and stained with Coomassie Brilliant Blue R250. Data from Qk053 batch #104340.



Original product page: https://qkine.com/product/recombinant-fgf2-g3-protein-qk053/

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