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Recombinant FGF2-G3 (145 aa) protein (Qk052)

Type: Stem cells

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

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Product Information

FGF2-G3 (145 aa) protein is a thermostable engineered form of FGF-2 (bFGF). Qk052 comprises the 145 aa form of FGF-2 (Qk025) with the nine amino acid substitutions 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 145 aa).

FGF2-G3 is used in B8 media (Kuo et al. 2019) for weekend free, high homogeneity induced pluripotent stem cell culture. This new 145 aa thermostable FGF-2 protein allows direct comparison of efficacy in systems using FGF-2 145 aa (Qk025) for chemically defined stem cell and organoid culture media, and cultured meat media development. High purity 16 kDa bioactive FGF2-G3 145 aa protein, animal origin-free (AOF), carrier protein-free and with no His-tag.

Product manufactured under license: International Patent Application No. PCT/EP2016/073567 and U.S. Patent No. 11,746,135.

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, FGF 2, Qk52

Molecular weight

16 kDa

Protein Uniprot number

High purity thermostable FGF2-G3 protein comprising 145 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
- Expressed in *E. coli*
- Animal origin-free (AOF) and carrier protein-free
- 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

- Induced pluripotent stem cell culture and maintenance

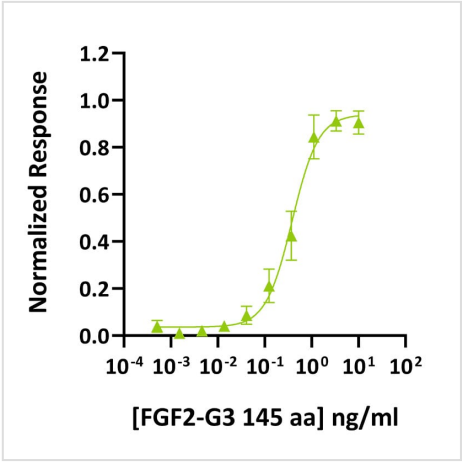
Further quality assays

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

Scientific Information

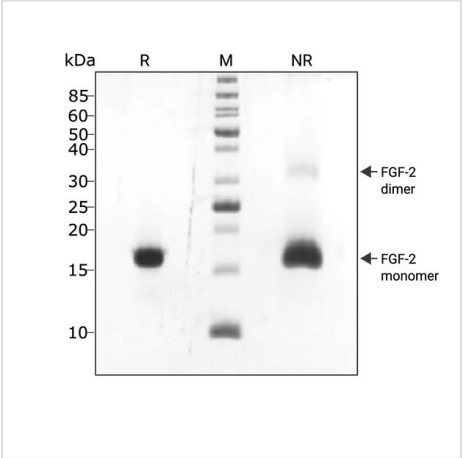
Bioactivity

FGF2-G3 (145 aa) activity was determined using the Promega serum response element luciferase reporter assay in transfected HEK293T cells. Cells were treated in triplicate with a serial dilution of FGF2-G3 (145 aa) for 3 hours. Firefly luciferase activity was measured and normalized to the control Renilla luciferase activity. Data from Qk052 lot #204567. EC50 = 0.38 ng/ml.



Purity

FGF2-G3 (145 aa) migrates as a major band at 16 kDa in non-reducing (NR) conditions. A small amount of dimer can be seen (higher molecular weight band). Upon reduction (R), only the 16 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 Qk052 batch #104339.



Original product page: https://qkine.com/product/recombinant-fgf2-g3-145aa-protein-qk052/

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