

## Recombinant zebrafish FGF-2 protein (Qk002)



**Type:** Stem cells

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

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### Product Information

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Zebrafish fibroblast growth factor 2 (FGF-2/bFGF/basic FGF) has been used extensively to support the maintenance and proliferation of human and mouse [induced pluripotent](#) (iPSC) and embryonic stem cells (ESC), used in the original [Ludwig et al](#) feeder-free culture of embryonic stem cells protocols.

High purity 17 kDa FGF-2 protein, [animal origin-free](#) (AOF) and carrier-protein free (CF). This version of recombinant zebrafish FGF-2 is used by the core facility at the [Cambridge Stem Cell Institute, UK](#) and historically by many of the stem cell groups based at University of Cambridge.

#### Alternative protein names

Basic fibroblast growth factor, bFGF, FGF-β, FGF2, Fibroblast growth factor-basic, HBGF-2, beta FGF, betaFGF, FGF 2, Qk2, Qk02

#### Molecular weight

17 kDa

#### Protein Uniprot number

High purity zebrafish Danio rerio FGF-2/bFGF (residues 2-154, Uniprot: B3DGE3)

#### Species reactivity

- zebrafish

- cross-reactivity:
- human

### **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**

- Stem cell expansion and maintenance

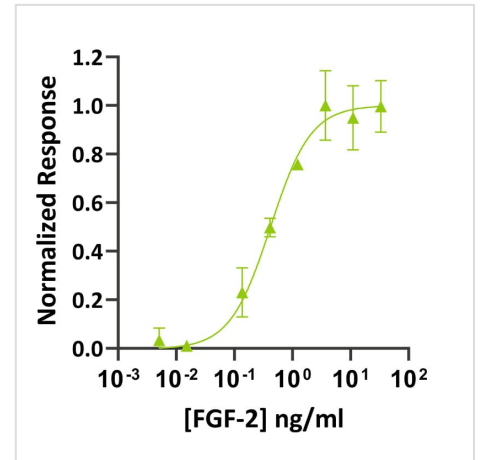
### **Further quality assays**

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

## Scientific Information

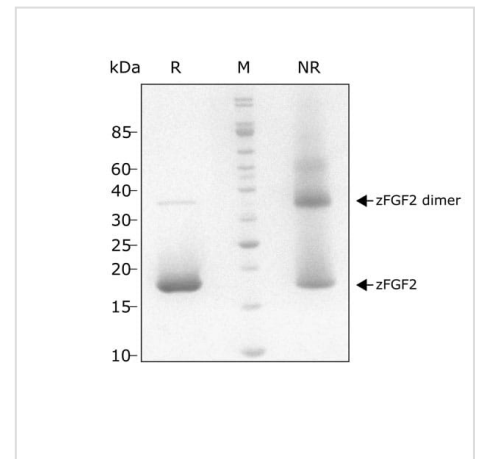
### Bioactivity

Zebrafish FGF-2 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 FGF-2 for 6 hours. Firefly luciferase activity was measured and normalized to the control Renilla luciferase activity. EC50 = 0.42 ng/ml (24.7 pM). Data are from Qk002 batch #011.



### Purity

FGF-2 migrates as major band at 17 kDa in non-reducing (-βME) conditions and upon reduction (+βME). The higher molecular mass band at 35 kDa is a dimer that we always see in our highly purified zebrafish FGF2 protein, the presence of this does not affect biological activity. Purified recombinant protein (7 μg) 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 Qk002 lot #011.



**Original product page:** <https://ryan.calliope-alpha.ts.net/product/recombinant-zebrafish-fgf2-protein/>

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