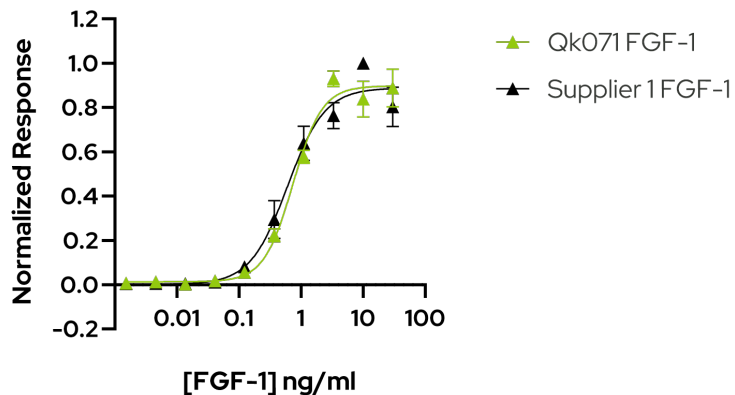


## Highly bioactive, animal-free FGF-1



Quantitative luciferase reporter assay shows that both FGF-1 (Qk071, green) and alternative supplier FGF-1 (Supplier 1, black) have high bioactivity with an EC50 of 0.74 ng/ml (46.6 pM) and 0.61 ng/ml (38.4 pM), respectively. Data for Qk071 lot #204537.

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### Introduction:

Fibroblast growth factor 1 (FGF-1) regulates mesenchymal cell proliferation, migration, and differentiation. It plays a crucial role in embryonic development, tissue regeneration, and wound healing. *In vitro*, FGF-1 is used to maintain stem cells and direct their differentiation into various cells, such as endothelial, epithelial, hematopoietic, and glial cells. It is also used for the development of organoids.

Animal-free growth factors will improve cell cultures' reproducibility and physiological relevance as they have higher lot-to-lot consistency and eliminate contamination from animal-derived ingredients. Qkine manufactures an animal-free, carrier-free, and tag-free FGF-1 to ensure high and consistent bioactivity. This technote demonstrates a comparable level of bioactivity between Qk071 FGF-1 and an alternative major supplier of bacterial-expressed FGF-1 (Supplier 1).

### Method:

The bioactivity of Qk071 FGF-1 and Supplier 1 FGF-1 is determined using the FGF-1-responsive firefly luciferase reporter assay. HEK293T cells are treated in triplicate with a serial dilution of FGF-1 for 3 hours. Firefly luciferase activity is measured and normalized to the control Renilla luciferase activity.

### Results:

The bioactivity comparison demonstrates that Qk071 FGF-1 has equivalent bioactivity to FGF-1 from an alternative major supplier. Qkine FGF-1 provides a reliable source of highly pure animal-free FGF-1 for the reproducible culture of mesenchymal, endothelial, hematopoietic, and glial cells.

Qkine FGF-1 and all our recombinant proteins come with a Bioactivity Guarantee, guaranteeing our proteins to be reproducibly bioactive in your cultures. To learn more or to purchase our animal-free recombinant proteins, visit [qkine.com](http://qkine.com)