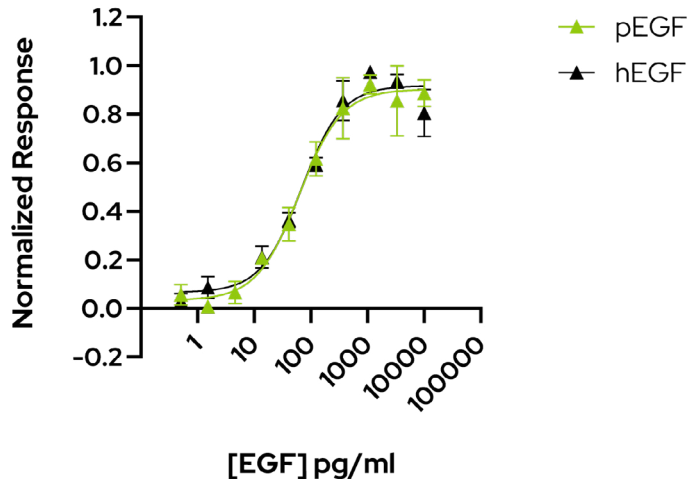


Bioactivity of porcine EGF is equivalent to human EGF



Quantitative luciferase reporter assay shows that pEGF (green) and hEGF (black) have comparable bioactivity with an EC50 of 64 pg/ml (10.2 pM) and 70.5 pg/ml (11.2 pM) respectively. Data from Qk064 lot #204515 and Qk011 lot #104419.

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Introduction:

Epidermal growth factor (EGF) is an essential growth factor for stimulating the proliferation of induced pluripotent and embryonic stem cells (iPSC and ESC) and their subsequent differentiation. Species-specific growth factors such as porcine EGF (pEGF) are essential for the development and maintenance of animal cell lines and cellular agriculture. Qkine manufactured an animal-free pEGF expressed in *E. Coli* reducing the risk of contamination from other animal-derived ingredients whilst maintaining a high bioactivity.

Method:

The bioactivity of porcine EGF (pEGF) and human EGF (hEGF) 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 EGF for 3 hours. Firefly luciferase activity is measured and normalized to the control Renilla luciferase activity.

Results and conclusion:

The bioactivity comparison between pEGF and hEGF showed that pEGF has an EC50 of 64 pg/ml which is comparable to hEGF with an EC50 of 70.5 pg/ml. The high bioactivity of pEGF provides a reliable source of animal-free and species-specific porcine EGF for animal studies and cellular agriculture. This has the potential to help scale-up the research in cultivated meat creating a more ethical and sustainable future.