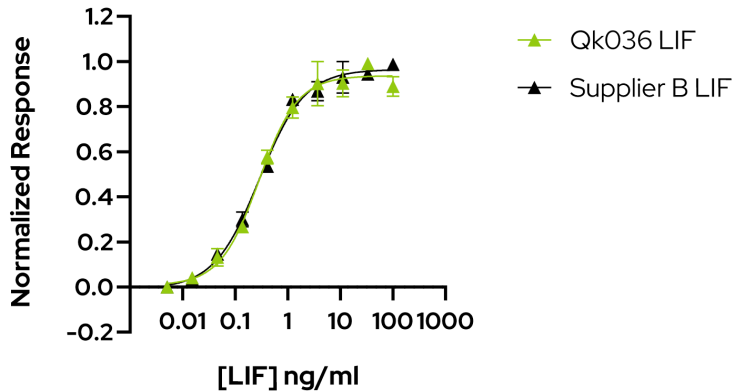


Highly bioactive, animal-free LIF



Quantitative luciferase reporter assay shows that both LIF (Qk036, green) and alternative supplier LIF (Supplier B, black) have high bioactivity with an EC50 of 0.28 ng/ml (16 pM) and 0.29 ng/ml (17 pM), respectively. Data for Qk03 lot #104293.

TNQK036-151123-v1.1

Introduction:

Leukemia Inhibitory Factor (LIF) belongs to the IL-6 cytokine family and regulates embryonic development, immune response, and inflammation. LIF is essential to maintain stem cell pluripotency, so it is widely used in embryonic and induced pluripotent stem cell cultures. LIF can also differentiate and maintain immune cells, such as T cells and macrophages. Animal-free growth factors can ensure that cell cultures are reproducible and physiologically relevant 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 LIF to ensure high level and consistent bioactivity. This technote demonstrates a comparable level of bioactivity between Qkine LIF and an alternative major supplier of bacterial-expressed LIF (Supplier B).

Method:

The bioactivity of Qk036 LIF and Supplier B LIF from an alternative supplier is determined using the LIF-responsive firefly luciferase reporter assay. HEK293T cells are treated in triplicate with a serial dilution of LIF overnight. Firefly luciferase activity is measured and normalized to the control Renilla luciferase activity.

Results:

The bioactivity comparison demonstrates that Qk071 LIF has equivalent bioactivity to LIF from an alternative major supplier. Qkine LIF provides a reliable source of highly pure animal-free LIF for the reproducible culture of stem cells and immune cells.

Qkine LIF and all Qkine 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