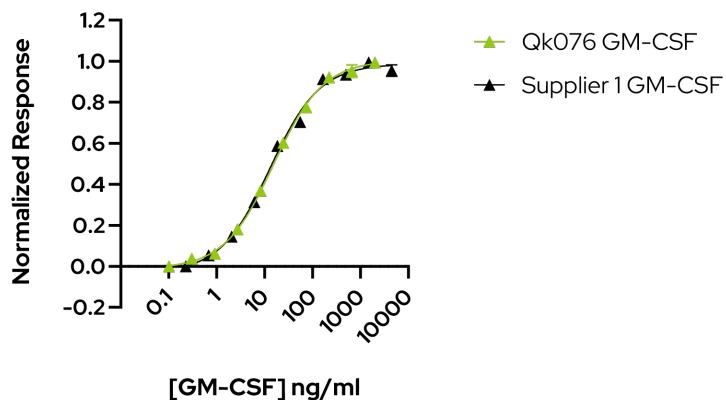


Animal-free, highly bioactive GM-CSF



Quantitative luciferase reporter assay shows that both GM-CSF (Qk076, green) and alternative supplier GM-CSF (Supplier 1, black) have a high bioactivity with an EC50 of 15.4 ng/ml (1 nM) and 12.9 ng/ml (0.9 nM) respectively. Data for Qk076 lot #204519.

TNQK076-091123-v1.1

Introduction:

Granulocyte-macrophage colony-stimulating factor (GM-CSF) is a hematopoietic growth factor involved in differentiating and activating monocytes and granulocytes. It is also involved in developing erythroid, megakaryocytes, and keratinocytes. It is commonly used in cell culture to stimulate the differentiation and maturation of human induced pluripotent stem cells or peripheral blood cells to myeloid lineages. 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 GM-CSF to ensure high and consistent bioactivity. This technote demonstrates a comparable level of bioactivity to an alternative major supplier of GM-CSF.

Method:

The bioactivity of Qk076 GM-CSF and bacterial-expressed GM-CSF from an alternative supplier is determined using the proliferation of TF-1 human myeloid leukemia cells. Cells are treated in triplicate with a serial dilution of GM-CSF for 48 hours. Cell viability is measured using the CellTiter-Glo (Promega) luminescence assay and normalized.

Results:

The bioactivity comparison demonstrates that Qkine GM-CSF (Qk076) has equivalent bioactivity to GM-CSF from an alternative major supplier. Qkine GM-CSF provides a reliable source of highly pure animal-free GM-CSF for the reproducible culture of myeloid and other relevant hematopoietic cells.

Qkine GM-CSF, along with all Qkine recombinant proteins, comes with a Bioactivity Guarantee, which guarantees our proteins to be reproducibly bioactive in your cultures. To learn more, or to purchase Qkine animal-free recombinant proteins, visit qkine.com