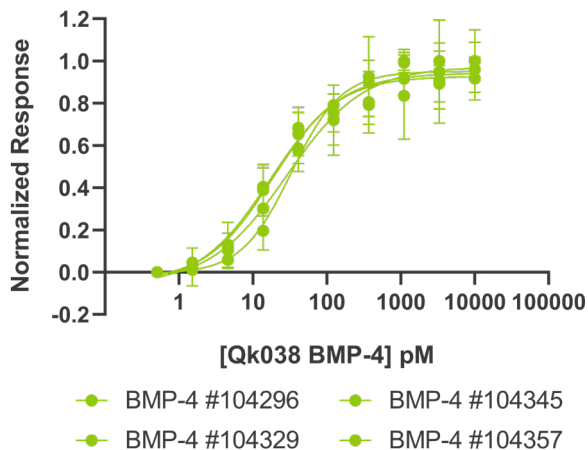


BMP-4 lot-to-lot consistency



Qkine BMP-4 has exceptional lot-to-lot consistency. Bioactivity of four independent lots of Qkine recombinant human BMP-4 has a bioactivity range of 17-34 pM as determined by luciferase assay (#104296, EC50=33.1 pM; #104329, EC50=18.3 pM; #104357, EC50=17.2 pM; #104357, EC50=29.0).

Introduction:

Human bone morphogenetic protein 4 (BMP-4) is a key regulator of embryogenesis and supports the differentiation of embryonic stem cells and induced pluripotent stem cells. In addition, BMP-4 plays a role in bone and cartilage formation, tissue repair, and organ and neuronal development.

BMP-4 is part of the TGF- β superfamily and has a complex biochemical structure. Expertise is required to manufacture BMP-4 at high purity and with exceptional lot-to-lot consistency.

Method:

Bioactivity was determined using a BMP-4-responsive firefly luciferase reporter assay in stably transfected HEK293T cells. Cells were treated with a serial dilution of BMP-4 for 6 hours in triplicate. Firefly luciferase activity was measured and normalized to the control, Renilla luciferase.

Results:

Bioactivity comparison between four independent lots of Qkine BMP-4 protein (Qk038), expressed in *E. coli*, shows a narrow bioactivity range of 17-34 pM.

The bioactivity of all newly manufactured lots of Qkine proteins are tested against previous lots. Exceptional lot-to-lot consistency of growth factors can contribute to an increased reproducibility in cell culture.