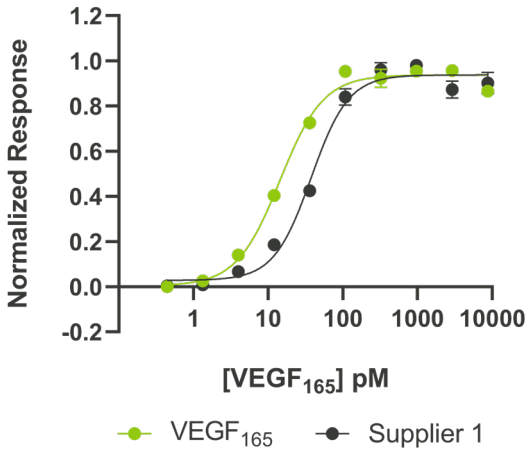
Technote

VEGF 165 for cost-effective cell culture



Qkine VEGF 165 has higher bioactivity than an alternative supplier. Bioactivity of recombinant VEGF 165 protein was determined by a luciferase assay. Qkine *E.coli* expressed VEGF 165 (Qk048, green) has a higher bioactivity (EC50=14.4 pM) than alternative *E.coli* expressed VEGF 165 (black, EC50=37.6 pM).

Introduction:
Vascular endothelial growth factor (VEGF) is a member of the platelet-derived growth factor (PDGF) family, and is widely used in stem cell culture, tissue engineering, and regenerative medicine. VEGF 165 is a key signaling regulator of vasculogenesis and angiogenesis. It also has an important role in neurogenesis, and promotes the growth and survival of vascular endothelial cells.

Method:
The bioactivity of Qkine VEGF 165 (Qk048) was compared with VEGF 165 from an alternative supplier. Bioactivity was determined using a luciferase reporter cell line which stably expresses the KDR (VEGFR-2) receptor. Cells were treated with a serial dilution of VEGF 165 for 6 hours in triplicate and the luciferase activity was measured and normalized.

Results:
Bioactivity comparison with a leading supplier shows Qkine VEGF 165 (expressed in *E.coli*) has higher bioactivity than a microbial expressed VEGF 165 from an alternative supplier. An increase in bioactivity could allow for a reduction of cytokines used in culture, providing a more cost-effective alternative.