

**Qkine noggin (Qk034, green) has a comparable bioactivity with alternative noggin (Supplier B, black).** The bioactivity of Qkine noggin and Supplier B noggin was determined by inhibiting BMP-2 (Qk007) activity in a BMP-2 responsive HEK293T firefly luciferase reporter assay. Cells were treated (in triplicate) with a serial dilution of Noggin and a standard concentration of BMP-2 for 6 hours.

Noggin is a bone morphogenetic protein (BMP) antagonist which regulates cell differentiation and growth during embryonic development. Noggin is used in the culture of embryonic and pluripotent stem cells and to derive neural and microglial lineages. It can also be used to generate intestinal, pancreatic, lung, and tumor-derived organoids.

Qkine noggin (Qk034) is animal origin-free, carrier-free, tag-free, and non-glycosylated to ensure high and consistent bioactivity.

## Qkine human noggin (Qk034) bioactivity

- Qkine noggin (Qk034) inhibited BMP-2 (Qk007) activity in a firefly luciferase reporter assay with an EC50 of 1.97 nM.
- The inhibition was comparable with alternative noggin from Supplier B which had an EC50 of 1.39 nM.

Qkine noggin (Qk034) has comparable bioactivity to noggin from an alternative major supplier. Qkine noggin (Qk034) has the advantage of being highly pure, bioactive and animal origin-free, giving lot-lot consistency for reproducible results in organoid culture.

