

## Recombinant mouse noggin protein (Qk033)



**Type:** Stem cells

**Available for purchase:** Unit Size (µg): 25, 50, 100, 500, 1000

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### Product Information

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Mouse noggin is a [bone morphogenetic protein \(BMP\) family antagonist](#) used in the culture of intestinal, pancreatic, lung and tumor-derived [organoids](#), maintenance of undifferentiated embryonic stem cells and for stem cell differentiation into neural and microglial lineages.

Qkine recombinant mouse noggin protein is a highly pure 46 kDa bioactive dimer for reproducible results, [animal origin-free](#) (AOF) and carrier-protein free.

#### Alternative protein names

Synostoses (multiple) syndrome 1, symphalangism 1 (proximal), Qk33

#### Molecular weight

46 kDa (dimer)

#### Protein Uniprot number

High purity mouse noggin protein (Uniprot: P97466)

#### Species reactivity

- mouse
- rat

## Product Information

- >98%, by SDS-PAGE quantitative densitometry
- Expressed in *E. coli*
- Animal origin-free (AOF) and carrier protein-free
- Manufactured in our Cambridge, UK laboratories
- Lyophilized from acetonitrile, TFA

## Reconstitution instructions

- Resuspend in 10 mM HCl (Reconstitution solution A) at >50 µg/ml

## Featured applications

- Tumor organoid culture
- Maintenance of undifferentiated embryonic stem cells
- Epithelial organoid culture
- Stem cell differentiation into neural and microglial lineages

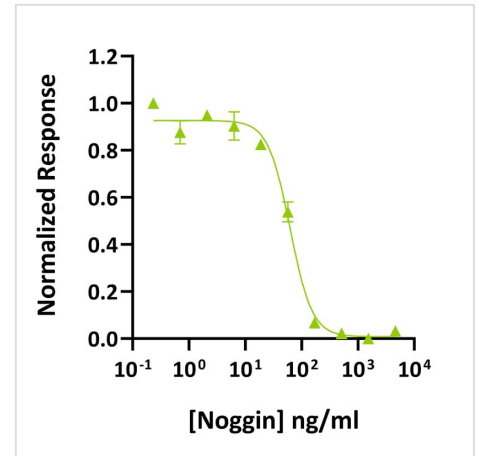
## Further quality assays

- Mass spectrometry: single species with expected mass
- Recovery from stock vial: >95%
- Endotoxin: <0.05 EU/µg protein

## Scientific Information

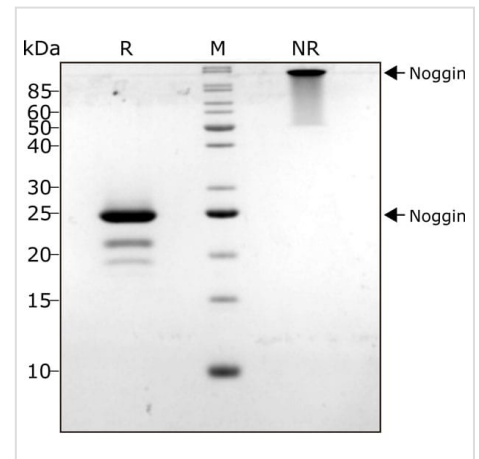
### Bioactivity

Noggin is a BMP inhibitor and its activity was determined by inhibition of BMP-2 (Qk007) activity in a BMP-2 responsive firefly luciferase reporter assay. HEK293T cells were treated (in triplicate) with a serial dilution of noggin and standard concentration of BMP-2 for 6 hours. Firefly luciferase activity was measured and normalized to the control Renilla luciferase activity. Data from Qk033 lot #104284, EC50 = 62.7 ng/ml (2.1 nM).



### Purity

Noggin protein (Qk033) has an unusual migration in non-reduced (NR) SDS-PAGE due to the non-covalent dimer which is the active protein. Similar migration in SDS-PAGE is seen for [Gremlin-1](#), a related BMP antagonist. The identity of the purified dimeric protein was confirmed using mass spectrometry. Upon reduction, the protein monomer migrates at 23 kDa. Purified recombinant mouse noggin protein (3 µg) was resolved using 15% w/v SDS-PAGE in reduced (+β-mercaptoethanol, R) and non-reduced conditions (NR) and stained with Coomassie Brilliant Blue R250. Data from Qk033 lot #104284.



**Original product page:** <https://ryan.calliope-alpha.ts.net/product/recombinant-mouse-noggin-protein-qk033/>

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