

# Human Noggin Protein

Cat. No. NOG-HM001



## Description

<b>Source</b>	Recombinant Human Noggin Protein is expressed from CHO without tag. It contains Gln28-Cys232.
<b>Accession</b>	Q13253
<b>Molecular Weight</b>	The protein has a predicted MW of 23.05 kDa. Due to glycosylation, the protein migrates to 30-36 kDa based on Bis-Tris PAGE result.
<b>Endotoxin</b>	Less than 0.05EU per $\mu\text{g}$ by the LAL method.
<b>Purity</b>	> 95% as determined by Bis-Tris PAGE

## Formulation and Storage

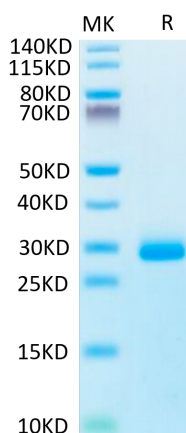
<b>Formulation</b>	Lyophilized from 0.22 $\mu\text{m}$ filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
<b>Reconstitution</b>	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 $\mu\text{g}/\text{ml}$ is recommended. Dissolve the lyophilized protein in distilled water.
<b>Storage</b>	-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

## Background

Noggin is an antagonist of bone morphogenetic proteins (BMP), being indispensable for certain developmental events. Noggin expression positively correlated with EGFR expression in both GC cell line models and The Cancer Genome Atlas human GC cohort. Targeting EGFR and its downstream pathways diminished cell proliferation which was promoted by Noggin. Noggin promotes the proliferation of GC cells by upregulating EGFR and enhancing a vicious circle formed by  $\beta$ catenin, EGFR, ERK and Akt.

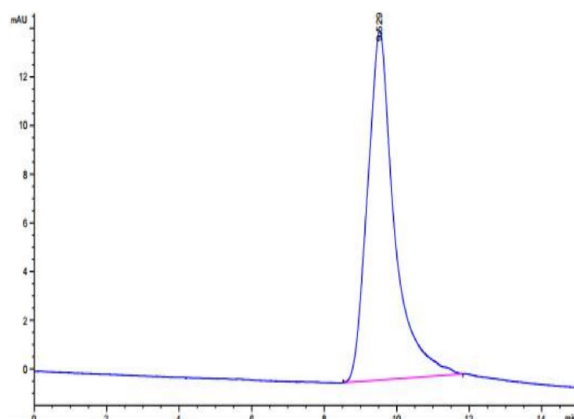
## Assay Data

### Bis-Tris PAGE



Human Noggin on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

### SEC-HPLC

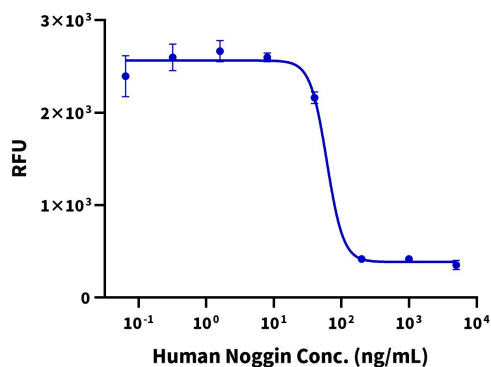


The purity of Human Noggin is greater than 95% as determined by SEC-HPLC.

Assay Data

Cell Based Assay

Recombinant Human Noggin Bioactivity



Measured by its ability to inhibit BMP-4-induced alkaline phosphatase production by ATDC5 mouse chondrogenic cells. The ED50 for this effect is 4-80 ng/mL in the presence of 50 ng/mL of recombinant Human BMP4.