

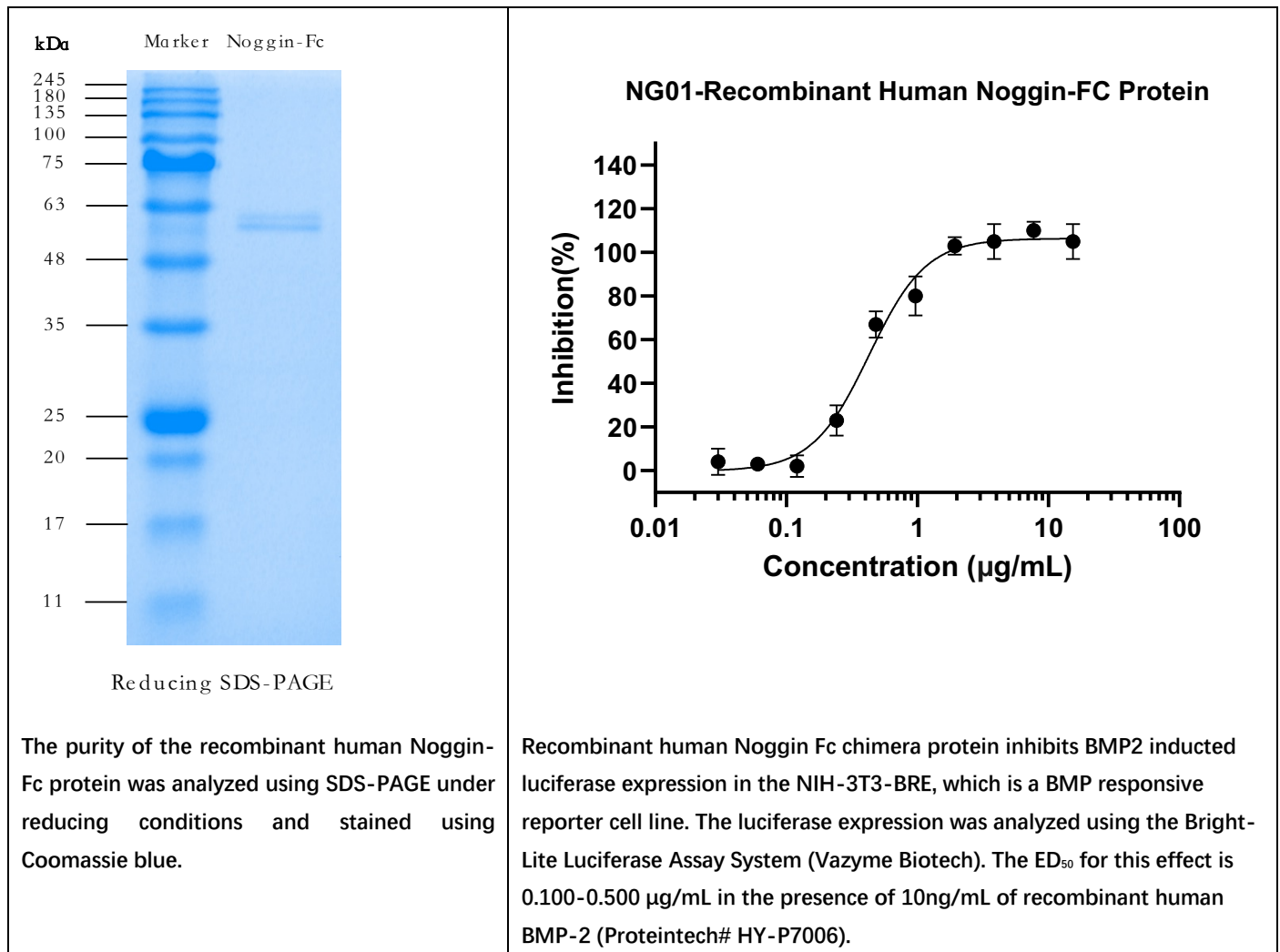
## Recombinant Human Noggin Fc Chimera Protein

Cat. No.: NG01-100                      Size: 100µg  
 Cat. No.: NG01-1000                    Size: 1mg

### Product Specifications

Source:	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%;">Human Noggin (Gln28-Cys232) Accession # Q13253</td> <td style="width: 33%;">EFGGGS</td> <td style="width: 33%;">Human IgG1 (Pro100-Lys330)</td> </tr> <tr> <td>N-terminus</td> <td></td> <td>C-terminus</td> </tr> </table> <p>Human HEK293 cell line, HEK293-derived human Noggin Fc chimera protein</p>	Human Noggin (Gln28-Cys232) Accession # Q13253	EFGGGS	Human IgG1 (Pro100-Lys330)	N-terminus		C-terminus
Human Noggin (Gln28-Cys232) Accession # Q13253	EFGGGS	Human IgG1 (Pro100-Lys330)					
N-terminus		C-terminus					
Accession:	<a href="#">Q13253</a>						
Purity:	>90%, by SDS-PAGE under reducing conditions.						
Endotoxin Level:	<0.10 EU/µg of the protein by the LAL method.						
Activity:	Recombinant human Noggin Fc chimera protein inhibits BMP2 induced luciferase expression in the NIH-3T3-BRE, which is a BMP responsive reporter cell line. The luciferase expression was analyzed using the Bright-Lite Luciferase Assay System (Vazyme Biotech). The ED50 for this effect is 0.100-0.500 µg/mL in the presence of 10ng/mL of recombinant human BMP-2 (Proteintech# HY-P7006).						
Organoids Culture Test:	Pass						
Structure:	Disulfide-linked homodimer.						
Predicted Molecular Weight	49.4 kDa (monomer).						
SDS-PAGE	58-62 kDa, reducing conditions.						
Sterile:	0.22µm sterile filtration.						
Product Form:	Lyophilized powder.						
Shipping & Storage:	<p>The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below:</p> <ul style="list-style-type: none"> <li>➤ To the date of expiration, -20°C to -80°C as supplied.</li> <li>➤ 3 months, -20°C to -80°C under sterile conditions after reconstitution.</li> <li>➤ 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> </ul> <p><b>Avoid repeated freeze-thaw cycles.</b></p>						

## Scientific Data



## Product Background:

Noggin is a secreted glycoprotein that blocks the activity of bone morphogenetic proteins (BMPs) and plays a crucial role in various biological processes. During embryogenesis, Noggin regulates the growth and patterning of neural tube, somites, and cardiomyocytes. It also prevents excessive chondrocyte proliferation, ensuring proper joint formation in skeletal development. Noggin is expressed in specific regions of the central nervous system and peripheral tissues. Furthermore, Noggin finds applications in regenerative medicine, stimulating bone development, and providing neuroprotection in early spinal cord injury stages.

In addition to its developmental roles, Noggin is extensively used in organoid culture. It is employed to generate and maintain specific types of organoids derived from stem cells. For example, Noggin is crucial for the differentiation of stem cells into intestinal organoids, allowing them to recapitulate the characteristics of the intestinal epithelium. Noggin is also utilized in the generation of brain organoids, promoting neural differentiation and the formation of neural structures within the organoids. Incorporating Noggin into organoid culture systems enables researchers to study organ development, disease modeling, and drug screening in a more sophisticated and functional manner.

The versatile nature of Noggin in both developmental processes and organoid culture highlights its importance in advancing our understanding of organogenesis and its potential applications in regenerative medicine,

personalized drug discovery, and disease modeling.

## References:

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## RUO Statement:

*Recombinant Human Noggin-Fc Protein for Research Use Only. It is not intended for diagnostic, therapeutic, or any other clinical applications.*

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