

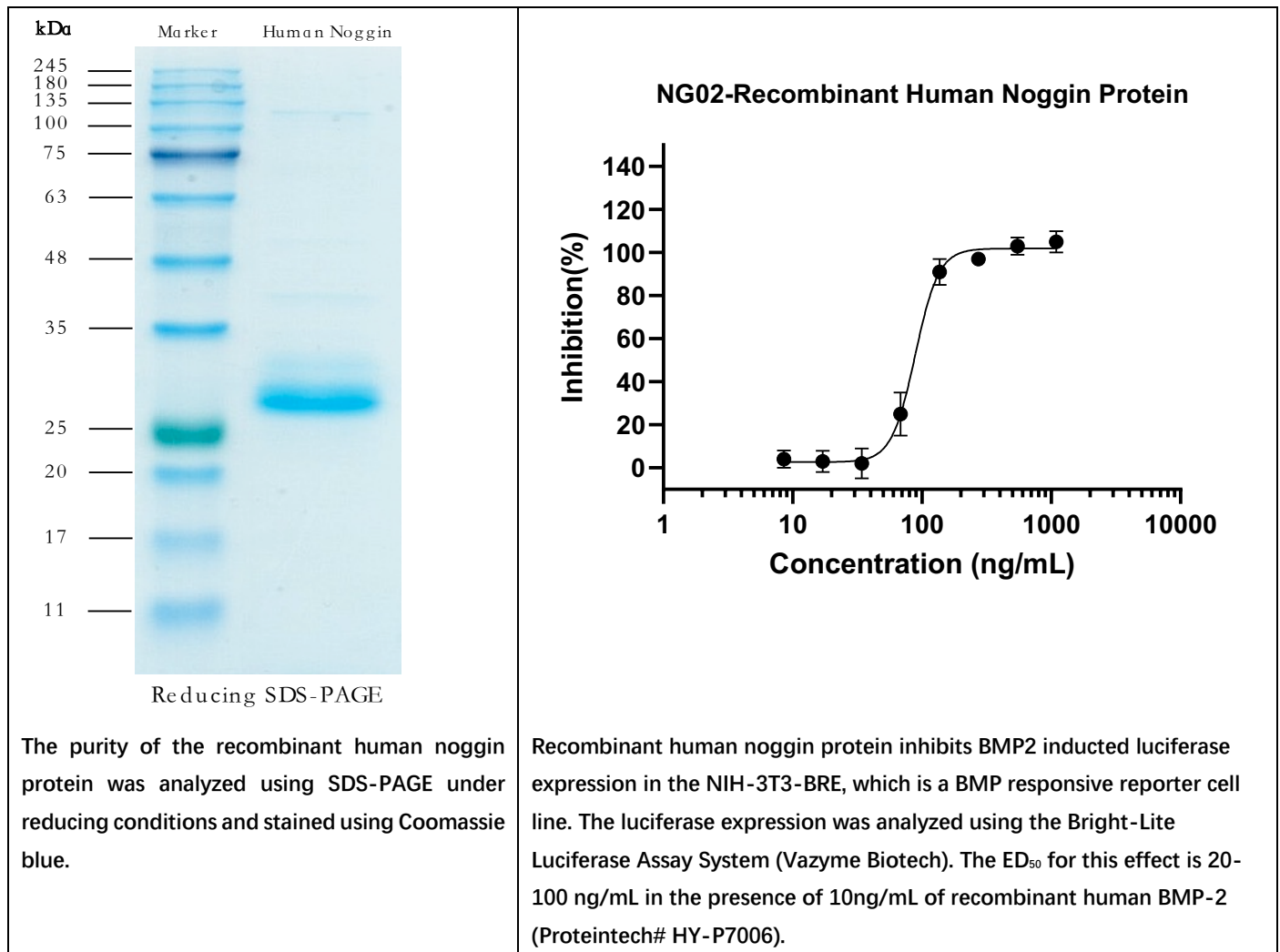
Recombinant Human Noggin Protein

Cat. No.: NG02-100 Size: 100µg
 Cat. No.: NG02-1000 Size: 1mg

Product Specifications

Source:	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td colspan="2" style="text-align: center;">Human Noggin (Gln28-Cys232) Accession # Q13253</td> </tr> <tr> <td style="text-align: center;">N-terminus</td> <td style="text-align: center;">C-terminus</td> </tr> </table> <p>Human HEK293 cell line, HEK293-derived human Noggin protein</p>	Human Noggin (Gln28-Cys232) Accession # Q13253		N-terminus	C-terminus
Human Noggin (Gln28-Cys232) Accession # Q13253					
N-terminus	C-terminus				
Accession:	Q13253				
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 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 20-100 ng/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	28 kDa (monomer).				
SDS-PAGE	28-45 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"> ➤ To the date of expiration, -20°C to -80°C as supplied. ➤ 3 months, -20°C to -80°C under sterile conditions after reconstitution. ➤ 1 month, 2 to 8 °C under sterile conditions after reconstitution. <p>Avoid repeated freeze-thaw cycles.</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 Protein for Research Use Only. It is not intended for diagnostic, therapeutic, or any other clinical applications.

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