

## Noggin Protein, Human (205a.a, HEK293)

Cat. No.:	HY-P73320
Synonyms:	NOG; Noggin; SYM1; SYNS1; SYNS1A
Species:	Human
Source:	HEK293
Accession:	Q13253/NP_005441.1 (Q28-C232)
Gene ID:	9241
Molecular Weight:	Approximately 29.7 kDa

### PROPERTIES

AA Sequence	<pre> M E R C P S L G V T   L Y A L V V V L G L   R A T P A G G Q H Y   L H I R P A P S D N L P L V D L I E H P   D P I F D P K E K D   L N E T L L R S L L   G G H Y D P G F M A T S P P E D R P G G   G G G A A G G A E D   L A E L D Q L L R Q   R P S G A M P S E I K G L E F S E G L A   Q G K K Q R L S K K   L R R K L Q M W L W   S Q T F C P V L Y A W N D L G S R F W P   R Y V K V G S C F S   K R S C S V P E G M   V C K P S K S V H L T V L R W R C Q R R   G G Q R C G W I P I   Q Y P I I S E C K C   S C           </pre>
Biological Activity	Measured by its ability to inhibit BMP4-induced alkaline phosphatase production by MC3T3E1 mouse preosteoblast cells. The ED <sub>50</sub> for this effect is 10-80 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	Noggin protein emerges as a crucial inhibitor in the intricate realm of bone morphogenetic proteins (BMP) signaling, playing indispensable roles in neural tube and somite growth, as well as contributing to the intricate processes of cartilage morphogenesis and joint formation. Operating through its homodimeric structure, Noggin establishes a significant
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interaction with GDF5, and likely GDF6, exerting its inhibitory influence on chondrocyte differentiation. This molecular interplay underscores Noggin's pivotal position in regulating key aspects of embryonic development, emphasizing its nuanced involvement in sculpting the intricate patterns and structures critical for proper growth and morphogenesis.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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