GMP Noggin Protein, Human (HEK293)

Cat. No.:	HY-P70558G
Synonyms:	Noggin; NOG
Species:	Human
Source:	HEK293
Accession:	Q13253 (Q28-C232)
Gene ID:	9241
Molecular Weight:	Approximately 28-32 kDa

PROPERTIES

AA Sequence	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
Biological Activity	Measured by its ability to inhibit BMP-2-induced alkaline phosphatase production by ATDC5 mouse chondrogenic cells The ED_{50} for this effect is ≤0.13 μg/mL in the presence of 2000 ng/mL of Recombinant Human BMP□2.
Appearance	Lyophilized powder.
Formulation	Lyophilized a 0.22 μm filtered solution of 20mM PB, 500mM NaCl, 2mM EDTA, pH 7.4.
Endotoxin Level	<0.01 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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

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.

REFERENCES

[1]. Kang HW, et al. In vitro and In vivo imaging of antivasculogenesis induced by Noggin protein expression in human venous endothelial cells. FASEB J. 2009;23(12):4126-4134.

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