

PRODUCT DATA SHEET



Bioworld Technology, Inc.

Recombinant Murine NOGGIN (rMuNOGGIN)

Catalog Number: PR2032

Source: Escherichia coli.

Quantity: 5µg/20µg/1.0mg

Description

Noggin belongs to a group of diffusible proteins which bind to ligands of the TGF-β family and regulate their activity by inhibiting their access to signaling receptors. The interplay between TGF-β ligands and their natural antagonists has major biological significance during development processes, in which cellular response can vary considerably depending upon the local concentration of the signaling molecule. Noggin was originally identified as a BMP-4 antagonist whose action is critical for proper formation of the head and other dorsal structures. Consequently, Noggin has been shown to modulate the activities of other BMPs including BMP-2,-7,-13, and -14. Targeted deletion of Noggin in mice results in prenatal death and recessive phenotype displaying a severely malformed skeletal system. Conversely, transgenic mice over-expressing Noggin in mature osteoblasts display impaired osteoblastic differentiation, reduced bone formation, and severe osteoporosis.

Molecular Weight:

Approximately 46.4 kDa disulfide-linked homodimer consisting of two 206 amino acid polypeptide chains.

Purity:

>95% by SDS-PAGE and HPLC analyses.

Biological Activity:

Determined by its ability to inhibit 5.0 ng/ml of BMP-4 induced alkaline phosphatase production by ATDC chondrogenic cells. The expected ED50 for this effect is 1.0-2.0 ng/ml of Noggin, corresponding to a Specific Activity of $\square 5 \times 10^5$ IU/mg.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

Lyophilized from a 0.2µm filtered concentrated solution in 30% acetonitrile, 0.1% TFA.

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 P 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

Endotoxin:

Less than 1EU/mg of rMuNOGGIN as determined by LAL method.

Reconstitution:

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in 10mM HAc to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at $\leq -20^\circ\text{C}$. Further dilutions should be made in appropriate buffered solutions.

Storage:

This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to

MADE IN CHINA

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-70°C. Avoid repeated freeze/thaw cycles.

HUMAN USE. Made in China

Usage:

This material is offered by USA Bioworld biotech for research, laboratory or further evaluation purposes. NOT FOR

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