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User Manual

Noggin (Noggin) (Human)

Cat. No. HEOPP-14032

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. 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.

Source:

Escherichia coli

Unit:

20 μg

Reconstitution:

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

Formulation:

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

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

Molecular Weight:

Approximately 46.2 kDa non-disulfide-linked homodimer consisting of two 206 amino acid polypeptide chains.

Endotoxin:

Less than 1 EU/µg of Noggin as determined by LAL method.

Usage:

This material is offered by Cyagen Biosciences for research, laboratory or further evaluation purposes. FOR RESEARCH USE ONLY. NOT INTENDED FOR ANY ANIMAL OR HUMAN THERAP EUTIC OR DIAGNOSTIC USE.

Biological Activity:

The ED50 determined by inhibiting BMP-4-induced alkaline phosphatase production of murine ATDC5 cells is less than 80 ng/mL, corresponding to a specific activity of > 1.3×10^4 IU/mg in the presence of 5 ng/mL BMP-4.

Physical Appearance:

Sterile filtered white lyophilized (freeze-dried) powder.

AA Sequence:

MQHYLHIRPA PSDNLPLVDL IEHPDPIFDP KEKDLNETLL RSLLGGHYDP GFMATSPPED RPGGGGGAAG GAEDLAELDQ LLRQRPSGAM PSEIKGLEFS EGLAQGKKQR LSKKLRRKLQ MWLWSQTFCP VLYAWNDLGS RFWPRYVKVG SCFSKRSCSV PEGMVCKPSK SVHLTVLRWR CQRRGGQRCG WIPIQYPIIS ECKCSC

Purity:

> 95% by SDS-PAGE and HPLC analyses.

Material Safety Data Sheets (MSDSs) are available upon request.

The Certificate of Analysis (COA), which provides detailed quality control information for each product, is also available at the Cyagen website.