Technical Data Sheet

Recombinant Human NOGGIN (rHu NOGGIN)

Human NOGGIN

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.

Catalog Number:	RC219-20
Source:	*Escherichia coli.*
Molecular Weight:	Approximately 46.2 kDa non-disulfide-linked homodimer consisting of two 206 amino acid polypeptide chains.
Quantity:	5ug/20ug/1mg
Purity:	>95% by SDS-PAGE and HPLC analyses.
Biological Activity:	The ED50 was determined by its ability to inhibit 5.0 ng/ml of BMP-4 induced alkaline phosphatase production by ATDC-5 chondrogenic cells. The expected ED_{50} for this effect is 0.05-0.08 μg/ml of NOGGIN.
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:	MQHYLHIRPAPSDNLPLVDLIEHPDPIFDPKEKDLNETLLRSLLGGHYDPGF MATSPPEDRPGGGGGAAGGAEDLAELDQLLRQRPSGAMPSEIKGLEFSEGL AQGKKQRLSKKLRRKLQMWLWSQTFCPVLYAWNDLGSFWPRYVKVGSCF SKRSCSVPEGMVCKPSKSVHLTVLRWRCQRRGGQRCG WIPIQYPIIS ECKCSC
Endotoxin:	Less than 1EU/μg of rHu NOGGIN 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 <-20°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 -70°C. **Avoid repeated freeze/thaw cycles**.
Usage:	This material is offered by Bio Basic Inc. for research, laboratory or further evaluation purposes. **NOT FOR HUMAN USE**.