

# Technical Data Sheet

## **Flogen<sup>®</sup> Recombinant Human Noggin (rHuNoggin)**

<b>Catalog Number:</b>	PGR0108-009
<b>Source:</b>	<i>Escherichia coli</i> .
<b>Molecular Weight:</b>	Approximately 46.2 kDa non-disulfide-linked homodimer consisting of two 206 amino acid polypeptide chains.
<b>Quantity:</b>	5µg/20µg/1mg
<b>AA Sequence:</b>	MQHYLHIRPA PSDNLPLVDL IEHPDPIFDP KEKDLNETLL RSLGGHYDP GFMATSPED RPPGGGGAAG GAEDLAELDQ LLRQRPSGAM PSEIKGLEFS EGLAQGKKQR LSKKLRRKLQ MWLWSQTFCP VLYAWNDLGS RFWPRYVKVG SCFSKRSCSV PEGMVCKPSK SVHLTVLRWR CQRRGGQRCG WIPIQYPIIS ECKCSC
<b>Purity:</b>	>95% by SDS-PAGE and HPLC analyses.
<b>Biological Activity:</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> 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 $> 1.3 \times 10^4$ IU/mg in the presence of 5ng/ml BMP-4
<b>Appearance:</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2µm filtered concentrated solution in 30% acetonitrile, 0.1% TFA.
<b>Endotoxin:</b>	Less than 1EU/µg of rHuNoggin as determined by LAL method.
<b>Reconstitution:</b>	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.
<b>Storage:</b>	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. <b>Avoid repeated freeze/thaw cycles.</b>
<b>Usage:</b>	This material is for research, laboratory or further evaluation purposes. <b>NOT FOR HUMAN USE.</b>

### ***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.