

**ChemWhat Technical Data Sheet (TDS)**

---

<b>Catalog Number:</b>	108-09
<b>Source:</b>	<i>Escherichia coli</i> .
<b>Molecular Weight:</b>	Approximately 46.3 kDa, non-disulfide-linked homodimer consisting of two 206 amino acid polypeptide chains.
<b>Quantity:</b>	5µg/20µg/1000µg
<b>AA Sequence:</b>	MQHYLHIRPA PSDNLPLVDL IEHPDPIFDP KEKDLNETLL RSLGGHYDP GFMATSPPED RPGGGGGAAG 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> as determined by inhibiting BMP-4-induced alkaline phosphatase production of murine ATDC5 cells is less than 3.0 ng/ml, corresponding to a specific activity of > 3.3 × 10 <sup>5</sup> IU/mg in the presence of 5 ng/ml rHuBMP-4.
<b>Physical Appearance:</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2 µm filtered concentrated solution in 30 % acetonitrile, 0.1 % TFA.
<b>Endotoxin:</b>	Less than 1 EU/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 HCl 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>Shipping:</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage:</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>
<b>Usage:</b>	ChemWhat Limited in UK offers this branded product for research, development or further evaluation purposes. <b>NOT FOR HUMAN USE.</b>

---

### ***Human Noggin***

Noggin encoded by the NOG gene, was first isolated from *Xenopus*, having the function of inducing secondary axis formation in frog embryos. It inhibits TGF-β family ligands and preventing them from binding to their corresponding receptors. Noggin was originally found as a BMP-4 antagonist, and then has been shown to modulate the activities of other BMPs (BMP-2, 7, 13 and 14). Additionally, it has pleiotropic effect, both in early development and later stages. The results of the mouse knockout of noggin suggest that it is involved in numerous developmental processes, such as neural tube fusion and joint formation. In recent report, proximal symphalangism (SYM1) and multiple synostoses syndrome (SYNS1) have relation with the mutant of evolutionarily conserved amino acid residues of Noggin. Mature human Noggin shares 99 %, 99 %, 98 %, 97 % and 89 % a.a. sequence identity with mouse, rat, bovine, equine and chicken Noggin, respectively.