Nog
Recombinant Mouse NOGGIN

Catalog No.	CSI20130A	**Quantity:**	5 µg
	CSI20130B		20 µg
	CSI20130C		1.0 mg

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. 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.
Recombinant Mouse NOGGIN (NOG) is a disulfide-linked homodimer consisting of two 206 amino acid polypeptide chains.

Gene ID: 18121

UniProtKB: P97466

Source: *E. coli*

Molecular Weight: 46.4 kDa

Formulation: Lyophilized from a sterile filtered concentrated solution in 30% Acetonitrile, 0.1% TFA

Purity: >95% by SDS-PAGE and HPLC

Endotoxin Level: <1 EU/µg

Biological Activity: Activity is determined by recombinant mouse Noggin's ability to inhibit BMP-4-induced alkaline phosphatase production by murine ATDC5 cells. The expected ED_{50} for this effect is < 2.0 ng/mL in the presence of 5 ng/mL BMP-4.

Specific Activity: In the presence of 5 ng/mL BMP-4, the specific activity is > 5.0×10^5 IU/mg.

Amino Acid Sequence: MQHYLHIRPAPSDNLPLVDLIEHPDPIFDPKEKDLNETLLRSLLGGHYDPGFMATSPPED RPGGGGGPAGGAEDLAELDQLLRQRPSGAMPSEIKGLEFSEGLAQGKKQRLSKKLRR KLQMWLWSQTCPVLYAWNDLGSRFWPRYVKVGSCFSKRSCSV PEGMVCKPSK SVHLTVLRWR CQRRGGQRCG WIPIQYPIIS ECKCSC

Reconstitution: **Centrifuge vial prior to opening.** Reconstitute in 10 mM HAc to a concentration less than 0.25 mg/mL. Further dilutions should be made in appropriate buffered solutions.

Storage & Stability: Upon receipt, store desiccated at -20 °C to -80°C. Upon reconstitution under sterile conditions, store at 2-8 °C for up to one month. For longer term, store in working aliquots at -20 °C to -80 °C. **Avoid repeated freeze-thaw cycles.**

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