



Noggin/ NOG (N-8His-Flag), Human, Recombinant

Cat. No.: PCK211

General Information

Synonyms Noggin; NOG

Species Human

Expression host Human Cells Gln28-Cys232 Sequence O13253 ®

Accession 23 kDa Mol mass

Measured by its ability to inhibit BMP-2-induced alkaline phosphatase production Bio activity

by ATDC5 mouse chondrogenic cells The ED50 for this effect is 0.2 μg/mL in the

presence of 2000 ng/mL of Recombinant Human BMP-2.

Product feature

Expiration date

> 95% as determined by reducing SDS-PAGE **Purity**

12 months

< 1.0 EU per μg as determined by LAL test. **Endotoxin**

Lyophilized protein should be stored at -5~-20°C, stable for one year after receipt. Storage

Reconstituted protein solution can be stored at 2-8°C for 2-7 days. Aliquots of

reconstituted samples are stable at -5~-20°C for 3 months.

Ambient temperature or ice pack. Shipping

Formulation Lyophilized from a 0.2 um filtered solution of 20 mM PB, 500 mM NaCl, 2 mM

EDTA, pH7.4.

Reconstitution Always centrifuge tubes before opening. Do not mix by vortex or pipetting. It is not

> recommended to reconstitute to a concentration less than 100 µg/mL. Dissolve the lyophilized protein in distilled water. Please aliquot the reconstituted solution to

minimize freeze-thaw cycles.

Backgroun

Noggin is a secreted homodimeric glyco Protein that is an antagonist of bone morphogenetic Proteins (BMPs). Mature Human Noggin contains an N-terminal acidic region, a central basic heparin-binding segment and a C-terminal cysteine-knot structure. Noggin is very highly conserved among vertebrates, such that mature human Noggin shares 99%, 99%, 98%, 97% and 89% aa sequence identity with mouse, rat bovine, equine and chicken Noggin, respectively. Secreted Noggin probably remains close to the cell surface due to its binding of heparin-containing proteoglycans. Noggin binds some BMPs such as BMP4 with high affinity and others such as BMP7 with lower affinity. It antagonizes BMP bioactivities by blocking epitopes on BMPs that are needed for binding to both type I and type II Receptors. Noggin is expressed in defined areas of the adult central nervous system and peripheral tissues such as lung, skeletal muscle and skin. During culture of human embryonic stem cells (hESC) or neural stem cells under certain conditions, addition of Noggin to antagonize BMP activity may allow

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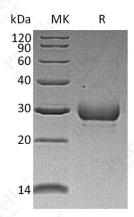




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stem cells to proliferate while maintaining their undifferentiated state, or alternatively, to differentiate into dopaminergic neurons.

SDS-PAGE









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