

## Recombinant Mouse Noggin (C-6His)

Catalog No.: RP0067

### Basic Information

#### Information

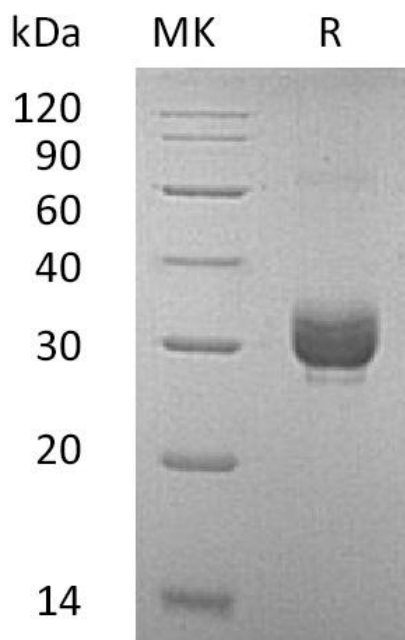
<b>Source</b>	<i>Human Cells</i>
<b>Description</b>	Recombinant Mouse Noggin is produced by our Mammalian expression system and the target gene encoding Gln28-Cys232 is expressed with a 6His tag at the C-terminus.
<b>Accession</b>	P97466
<b>Known As</b>	Noggin; Nog
<b>Predicted Mol Mass</b>	23.9 KDa
<b>Apparent Mol Mass</b>	30 KDa, reducing conditions

#### Properties

<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of PBS, 5mM EDTA, 5% Trehalose, pH 7.4.
<b>Storage</b>	Lyophilized protein should be stored at ≤ -20°C, stable for one year after receipt. Reconstituted protein solution can be stored at 2-8°C for 2-7 days. Aliquots of reconstituted samples are stable at ≤ -20°C for 3 months.
<b>Endotoxin</b>	< 1 EU/µg as determined by LAL test.
<b>Reconstitution</b>	Always centrifuge tubes before opening. Do not mix by vortex or pipetting. It is not recommended to reconstitute to a concentration less than 100µg/ml. Dissolve the lyophilized protein in distilled water. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.

## Experimental Data

### Purity-SDS-PAGE



Greater than 95% as determined by reducing SDS-PAGE.

## Background

Noggin is a secreted homodimeric glycoprotein that is an antagonist of bone morphogenetic proteins (BMPs). Mouse Noggin cDNA encodes a 232 amino acid (aa) residue precursor protein with 19 aa residue putative signal peptide that is cleaved to generate the 213 aa residue mature protein which is secreted as a homodimeric glycoprotein. 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 stem cells to proliferate while maintaining their undifferentiated state, or alternatively, to differentiate into dopaminergic neurons.