

## Noggin Human HEK293 cells

### Product Data Sheet

<b>Type:</b> Recombinant	<b>Cat. No.:</b>	
<b>Source:</b> HEK293 cells	RBG10249005	(5 µg)
<b>Species:</b> Human	RBG10249020	(20 µg)
	RBG10249100	(100 µg)

### Description

Noggin belongs to a group of diffusible proteins that bind to ligands of the TGF-beta family, and regulate their activity by inhibiting their access to signaling receptors. The interplay between TGF-beta ligands and their natural antagonists has major biological significance during development processes, in which cellular response can vary considerably depending upon the local concentration of the signaling molecule. Noggin was originally identified as a BMP-4 antagonist whose action was 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 a 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 Human Noggin is a 46 kDa disulfide-linked homodimer consisting of two 205 amino acid polypeptide chains. Monomeric glycosylated noggin migrates at an apparent molecular weight of approximately 28.0-33.0 kDa by SDS PAGE analysis under reducing conditions.

### Amino Acid Sequence

QHYLEHIRPAP SDNLPLVDLI EHPDPIFDPK EKDLNETLLR SLLGGHYDPG FMATSPPEDR PGGGGGAAGG AEDLAELDQL  
LRQRPSGAMP SEIKGLEFSE GLAQGKKQRL SKKLRRKLQM WLWSQTFPCV LYAWNDLGSR FWPRYVKVGS CFSKRSCSVP  
EGMVCKPSKS VHLTVLRWRC QRRGGQRCGW IPIQYPIISE CKCSC

### Source

HEK293 cells

### Purity

95%

### Biological Activity

Determined by its ability to inhibit 5.0 ng/ml of BMP-4 induced alkaline phosphatase production by ATDC chondrogenic cells. The expected ED<sub>50</sub> for this effect is 2.0-3.0 ng/ml of Noggin.

### Endotoxin

Endotoxin level is <0.1 ng/µg of protein (<1EU/µg).

### Reconstitution

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

### Storage, Stability/Shelf Life

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