

## PRODUCT INFORMATION SUMMARY

### Human NOGGIN

Purified Factor	Product Number	HC70039B	20.0 ug
	Product Number	HC70039A	5.0 ug

#### DESCRIPTION:

Human NOGGIN was originally identified as a BMP-4 antagonist involved in the formation of dorsal and head structures. NOGGIN is a member of related proteins that bind to TGF beta family ligands. Deletion of NOGGIN genes in mice results in a recessive phenotype that displays a malformed skeleton and prenatal death. It is also known to modulate activity of other BMPs. Human NOGGIN is a 23.1 kDa homodimer protein with 206 amino acid residues.

#### SOURCE: HEK cells

Purity > 95% by HPLC analysis  
Endotoxin < 0.1 ng per ug human NOGGIN  
Sterile filtered and lyophilized, additive-free.

#### BIOLOGICAL ACTIVITY:

Fully biologically active when compared to standards, activity determined by ability to inhibit BMP-4 (5.0 ng/mL) induced alkaline phosphatase production by ATDC chondrogenic cells, with 50% endpoint of 3.0 ng/mL human NOGGIN.

#### HANDLING AND STORAGE:

Purified NOGGIN factor is provided sterile-filtered and lyophilized, with no additives. Store lyophilized, at -20°C. Upon **reconstitution** with **distilled water** to concentration of 100.0 ug/mL further dilute in PBS or other buffered solutions. Store small aliquots, with addition of 0.1% BSA, at -20° C for long-term storage - up to 3 months, at high concentration.

**Before opening vial**, it is recommended to microcentrifuge vial for 30 seconds to spin-down any lyophilized material that may adhere to top of vial. The small amounts of protein may adhere to the vial as a very thin coat of lyophilized material, and may be difficult to see as a pellet.

#### WARRANTY:

Products sold hereunder are warranted only to conform to the quantity and contents stated on the label at the time of delivery to the customer. There are no warranties, expressed or implied, which extend beyond the description on the label of the product.

**RESEARCH USE ONLY -NOT for DRUG USE**