

Recombinant Human Noggin/NOG Protein (aa 28-232, Fc Tag)(Active)

Catalog No. PKS033577

Description

Synonyms	Noggin;SYM1;SYNS1
Species	Human
Expression_host	Human Cells
Sequence	Gln28-Cys232
Accession	Q13253
Mol_Mass	50.2 kDa
AP_Mol_Mass	60 kDa
Tag	C-Fc
Bio_activity	Immobilized Human BMP-2(Cat: PKSR030454) at 2µg/ml(100 µl/well) can bind Human Noggin-Fc. The ED50 of Human Noggin-Fc is 0.045µg/mL.

Properties

Purity	> 95% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg as determined by the LAL method.
Storage	Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks.Reconstituted protein solution can be stored at 4-7°C for 2-7 days.Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS,pH7.4.
Reconstitution	Please refer to the printed manual for detailed information.

Background

Noggin is a secreted homodimeric glycoprotein 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 stem cells to proliferate while maintaining their undifferentiated state, or alternatively, to differentiate into dopaminergic neurons.

SDS-PAGE

