Recombinant Protein Technical Manual

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

RPES0741

Product Data:

Product SKU: RPES0741

Size: 10µg

Species: Human

Expression host: Human Cells

Uniprot: Q13253

Protein Information:

Molecular Mass:	50.2 kDa
AP Molecular 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.
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℃, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ 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.
Application:	Functional ELISA
Synonyms:	Noggin;SYM1;SYNS1

Immunogen Information:

Sequence: Gln28-Cys232

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.