Data Sheet (Cat.No.TMPK-00926)

TargetMol

Noggin/NOG Protein, Mouse, Recombinant (His & Flag)

General Information

Synonyms:	SYNS1;NOG;SYM1;Noggin
Protein Construction:	Gln28-Cys232
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P97466
Molecular Weight:	25.16 kDa (predicted). Due to glycosylation, the protein migrates to 28-38 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Measured by its ability to inhibit BMP-4-induced alkaline phosphatase production by ATDC5 mouse chondrogenic cells. The ED50 for this effect is 4-80 ng/mL in the presence of 50 ng/mL of recombinant Human BMP-4.
Purity:	> 95% as determined by Tris-Bis PAGE; > 90% as determined by HPLC
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, 100 mM L-arginine (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Noggin is an antagonist of bone morphogenetic proteins (BMP), being indispensable for certain developmental events.Noggin expression positively correlated with EGFR expression in both GC cell line models and The Cancer Genome Atlas human GC cohort. Targeting EGFR and its downstream pathways diminished cell proliferation which

was promoted by Noggin. Noggin promotes the proliferation of GC cells by upregulating EGFR and enhancing a vicious circle formed by β-catenin, EGFR, ERK and Akt.

Reference

Sun Z, et al. Noggin is associated with a poor prognosis of gastric cancer by promoting the proliferation of gastric cancer cells via the upregulation of EGFR. Int J Oncol. 2020 Sep;57(3):813-824. doi: 10.3892/ijo.2020.508Epub 2020 Jun 16. PMID: 32705152.