

Recombinant Human Noggin protein(Fc Tag)

Catalog Number: PKSH034199

Note: Centrifuge before opening to ensure complete recovery of vial contents.

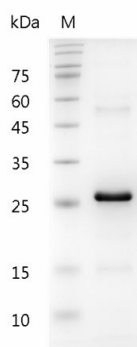
Description

| | |
|----------------------|---|
| Species | Human |
| Source | HEK293 Cells-derived Human Noggin protein Gln 28-Cys 232, with an C-terminal Fc |
| Calculated MW | 24 kDa |
| Observed MW | 27 kDa |
| Accession | Q13253 |
| Bio-activity | Measure by its ability to inhibit BMP-4-induced alkaline phosphatase production by ATDC5 cells. The ED ₅₀ for this effect is <0.05 µg/mL in the presence of 50 ng/mL of recombinant human BMP-4. |

Properties

| | |
|-----------------------|---|
| Purity | > 98 % as determined by reducing SDS-PAGE. |
| Endotoxin | < 0.1 EU per µg of the protein as determined by the LAL method. |
| Storage | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°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 sterile PBS, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual. |
| Reconstitution | Please refer to the printed manual for detailed information. |

Data



> 98 % as determined by reducing SDS-PAGE.

Background

For Research Use Only

Toll-free: 1-888-852-8623
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Noggin is a secreted protein involved at multiple stages of vertebrate embryonic development including neural induction and is known to exert its effects by inhibiting the bone morphogenetic protein (BMP)-signaling pathway. It binds several BMPs with very high (picomolar) affinities; with a marked preference for BMP2 and BMP4 over BMP7. By binding tightly to BMPs; Noggin prevents BMPs from binding their receptors. Noggin binds the bone morphogenetic proteins (BMP) such as BMP-4 and BMP-7; and inhibits BMP signaling by blocking the molecular interfaces of the binding epitopes for both type I and type II receptors. Interaction of BMP and its antagonist Noggin governs various developmental and cellular processes; including embryonic dorsal-ventral axis; induction of neural tissue; formation of joints in the skeletal system and neurogenesis in the adult brain. Noggin plays a key role in neural induction by inhibiting BMP4; along with other TGF- β ; signaling inhibitors such as chordin and follistatin. Mouse knockout experiments have demonstrated that noggin also plays a crucial role in bone development; joint formation; and neural tube fusion.

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