
Noggin Rabbit pAb

Catalog Number: bs-2975R

Target Protein: Noggin

Concentration: 1mg/ml

Form: Liquid

Host: Rabbit

Clonality: Polyclonal

Isotype: IgG

Applications: IHC-P (1:100-500), IHC-F (1:100-500), IF (1:100-500), Flow-Cyt (1ug/Test)

Reactivity: Human, Mouse, Rat (predicted:Rabbit, Pig, Sheep, Cow, Chicken, Dog, Horse)

Predicted MW: 23 kDa

Entrez Gene: 9241

Swiss Prot: Q13253.1

Source: KLH conjugated synthetic peptide derived from human Noggin: 28-130/232.

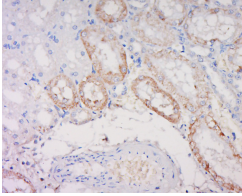
Purification: affinity purified by Protein A

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.

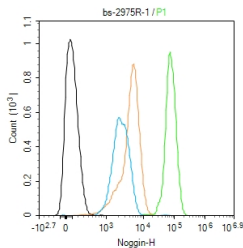
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: 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.

VALIDATION IMAGES



Tissue/cell: rat kidney tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum, C-0005) at 37°C for 20 min; Incubation: Anti-Noggin Polyclonal Antibody, Unconjugated (bs-2975R) 1:500, overnight at 4°C, followed by conjugation to the secondary antibody (SP-0023) and DAB (C-0010) staining



Blank control (black line) : HeLa. Primary Antibody (green line): Rabbit Anti-Noggin antibody (bs-2975R) Dilution: 1 µg/Test; Secondary Antibody : Goat anti-rabbit IgG-AF488 Dilution: 0.5 µg/Test. Negative control (white blue line) : PBS Isotype control (orange line) : Normal Rabbit IgG Protocol. The cells were fixed with 4% PFA (10min at room temperature) and then permeabilized with 90% ice-cold methanol for 20 min at -20°C. The cells were then incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at room temperature. Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.

PRODUCT SPECIFIC PUBLICATIONS

[IF=8.724] Yong Tang, et al. Phosphorylation inhibition of protein-tyrosine phosphatase 1B tyrosine-152 induces bone regeneration coupled with angiogenesis for bone tissue engineering. *Bioact Mater.* 2021 Jul;6:2039 IF,IHC ; Mouse . 33511306

[IF=2.58] Song, Liang-Li, et al. "Expression Characteristics of BMP2, BMPRII and Noggin in Different Stages of Hair Follicle in Yak Skin." *General and Comparative Endocrinology* (2017). WB ; "Other Species" . 29174869

[IF=3.405] Dawson LE et al. Induction of Myogenic Differentiation Improves Chemosensitivity of Chemoresistant Cells in Soft-Tissue Sarcoma Cell Lines. *Sarcoma.* 2020 Mar 26;2020:8647981. FCM ; human . 32300280

[IF=2.107] Sun X et al. Expression and distribution of bone morphogenetic protein 4 and its antagonist Noggin in the skin of Kazakh sheep (*Ovis aries*) with a white and brown coat color. *Acta Histochem.* 2020 May;122(4):151539. WB,IHC ; sheep . 32331775

[IF=2.413] Shouhui Wang, et al. The changes of bone vessels and their role in bone loss in tail-suspended rats. *Acta Astronaut.* 2021 Dec;189:368 IF ; rat . 10.1016/j.actaastro.2021.08.031