

Technical Data Sheet

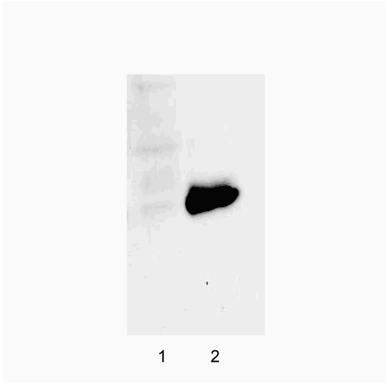
Purified Mouse anti-Noggin

Product Information

Material Number:	560170
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	L98-788
Immunogen:	Human Noggin Recombinant Protein
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human
Target MW:	32 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

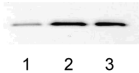
Description

The L98-788 monoclonal antibody reacts with noggin glycoprotein, a secreted antagonist of the bone morphogenic proteins (BMPs). Noggin homodimers block the binding of BMPs to their receptors. The phenotypes of natural noggin mutations in humans (such as symphalangism proximal syndrome, synostoses syndrome 1, and brachydactyly type B2) and noggin-null mice indicate that noggin regulates cartilage and joint formation. Noggin is also involved in neural tube, somite, and myocardial morphogenesis and osteoblastic/osteoclastic responses to metastatic cancers. Noggin is highly conserved in vertebrates; the amino-acid sequence identities of human noggin with mouse, rat, bovine, equine, chicken, and frog (*Xenopus*) noggin are 99%, 99%, 98%, 97%, 89%, and 81%, respectively.



**Western Blot analysis of Noggin in human embryonic cells.** Lysates from H9 human ES cells\* (WiCell, Madison, WI, lane 1) and human embryoid bodies (lane 2) were probed with Purified Mouse anti-Noggin monoclonal antibody at 1.0 µg/ml. Noggin is identified as a band of 32 kDa in the embryoid bodies.

\*The H9 cells were cultured on a mitomycin C-treated mouse embryonic fibroblast feeder layer [MEF (CF-1), ATCC SCRC-1040] that maintains the undifferentiated state of the ES cells. The lysate was made from a mixture of the 2 cell types, the majority of which were H9 cells.



**Western Blot validation of Noggin by RNAi in transformed human epithelial cells.** Lysates from 293 fetal kidney cell line (ATCC CRL-1573) transfected with Noggin RNAi (lane 1), transfected with ERK2 RNAi (lane 2), and untransfected (lane 3) were probed with Purified Mouse anti-Noggin monoclonal antibody at 1.0 µg/ml. Down-regulation of Noggin expression is evident in the Noggin RNAi-transfected cells.



**Western Blot analysis of Noggin in human neuroectodermal tumor.** Lysate from PFSK-1 cells (ATCC CRL-2060) was probed with Purified Mouse anti-Noggin monoclonal antibody at titrations of 0.1 (lane 1), 0.05 (lane 2), and 0.025 µg/ml (lane 3). Noggin is identified as a band of 32 kDa.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at 4°C.

Application Notes

Application

Western blot

Routinely Tested

BD Biosciences

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## Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

## Product Notices

1. Please refer to [www.bdbiosciences.com/pharming/en/protocols](http://www.bdbiosciences.com/pharming/en/protocols) for technical protocols.
2. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

## References

Choi M, Stottmann RW, Yang Y-P, Meyers EN, Klingensmith J. The bone morphogenetic protein antagonist noggin regulates mammalian cardiac morphogenesis. *Circ Res.* 2007; 100:220-228. (Biology)

Groppe J, Greenwald J, Wiater E, et al. Structural basis of BMP signalling inhibition by the cystine knot protein noggin. *Nature.* 2002; 420:636-642. (Biology)

McMahon JA, Takada S, Zimmerman LB, Fan C-M, Harland RM, McMahon AP. Noggin-mediated antagonism of BMP signaling is required for growth and patterning of the neural tube and somite. *Genes Dev.* 1998; 12:1438-1452. (Biology)

Schwaninger R, Rentsch CA, Watterwald A, et al. Lack of noggin expression by cancer cells is a determinant of the osteoblast response in bone metastases. *Am J Pathol.* 2007; 170(1):160-175. (Biology)

Valenzuela DM, Economides AN, Rojas E, et al. Identification of mammalian noggin and its expression in the adult nervous system. *J Neurosci.* 1995; 15(9):6077-6084. (Biology)