

## Anti-Nestin Antibody Picoband™

Catalog Number: PB9874

### About NES

Nestin is a type VI intermediate filament (IF) protein that in humans is encoded by the NES gene. This gene is mapped to 1q23.1. Distribution and expression of nestin in mitotically active cells suggests it plays a role in regulation of the assembly and disassembly of intermediate filaments, which, together with other structural proteins, participate in remodeling of the cell. The role of nestin in dynamic cells, particularly structural organization of the cell, appears strictly regulated by phosphorylation, especially its integration into heterogeneous intermediate filaments together with vimentin or alpha-internexin. Furthermore, nestin expression has been extensively used as a marker for central nervous system (CNS) progenitor cells in different contexts, based on observations indicating a correlation between nestin expression and this cell type in vivo.

### Overview

Product Name	Anti-Nestin Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Nestin Antibody Picoband™ catalog # PB9874. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P48681

### Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human Nestin, different from the related mouse sequence by four amino acids, and from the related rat sequence by five amino acids.
Predicted Reactive Species	Bovine, Canine, Horse, Monkey, Rabbit
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and IHC(F).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG

Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, By Heat</p> <p>Immunohistochemistry (Frozen Section), 0.5-1ug/ml</p> <p>Western blot, 0.1-0.5ug/ml</p>

## Anti-Nestin Antibody Picoband™ (PB9874) Images



Figure 1. Western blot analysis of Nestin using anti-Nestin antibody (PB9874).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: HELA whole cell lysates,

Lane 2: HEPG2 whole cell lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Nestin antigen affinity purified polyclonal antibody (Catalog # PB9874) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Nestin at approximately 230 kDa. The expected band size for Nestin is at 177 kDa.

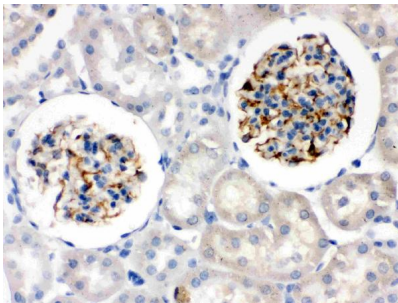


Figure 2. IHC analysis of Nestin using anti-Nestin antibody (PB9874).

Nestin was detected in a paraffin-embedded section of rat kidney tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Nestin Antibody (PB9874) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

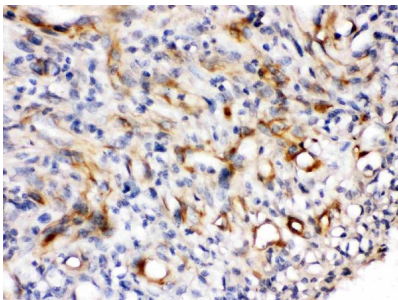
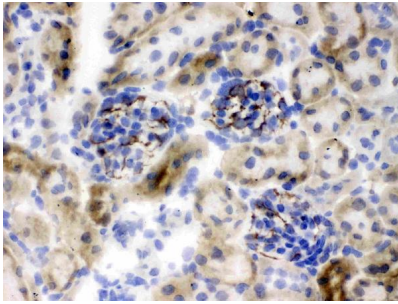


Figure 3. IHC analysis of Nestin using anti-Nestin antibody (PB9874).

Nestin was detected in a paraffin-embedded section of human melanoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Nestin Antibody (PB9874) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

Figure 4. IHC analysis of Nestin using anti-Nestin antibody (PB9874).

Nestin was detected in frozen section of mouse kidney tissue. The tissue section was blocked with 10% goat serum.



The tissue section was then incubated with 1ug/ml rabbit anti-Nestin Antibody (PB9874) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

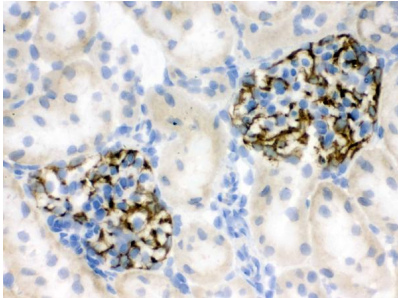


Figure 5. IHC analysis of Nestin using anti-Nestin antibody (PB9874).

Nestin was detected in frozen section of rat kidney tissue. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Nestin Antibody (PB9874) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

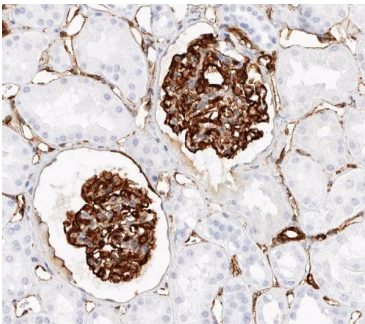


Figure 6. IHC analysis of Nestin using anti-Nestin antibody (PB9874).

Nestin was detected in a paraffin-embedded section of rat kidney tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Nestin Antibody (PB9874) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

## 49 Publications Citing This Product

1. PubMed ID: 10.1371/journal.pone.0079408, Impaired Spatial Learning and Memory after Sevoflurane–Nitrous Oxide Anesthesia in Aged Rats Is Associated with Down-Regulated cAMP/CREB Signaling
2. PubMed ID: 10.3892/ijmm.2011.734, Involvement of calmodulin and actin in directed differentiation of rat cortical neural stem cells into neurons
3. PubMed ID: 10.3969/j.issn.1673-5374.2012.19.002, Distribution and localization of fibroblast growth factor-8 in rat brain and nerve cells during neural stem/progenitor cell differentiation

Visit [bosterbio.com/anti-nestin-picoband-trade-antibody-pb9874-boster.html](http://bosterbio.com/anti-nestin-picoband-trade-antibody-pb9874-boster.html) to see all 49 publications.

## Submit a product review to Biocompare.com

Submit a review of this product to Biocompare.com to receive a \$20 Amazon.com giftcard! Your reviews help your fellow scientists make the right decisions. Thank you for your contribution.



## Anti-Nestin Antibody <sup>™</sup>