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Nestin Antibody (S1409)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2020D

Specification

Nestin Antibody (S1409) - Product Information

Application	**IF, WB, IHC-P, FC,E**
Primary Accession	P48681
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit Ig**
Antigen Region	**1389-1416**

Nestin Antibody (S1409) - Additional Information

Gene ID 10763

Other Names
Nestin, NES

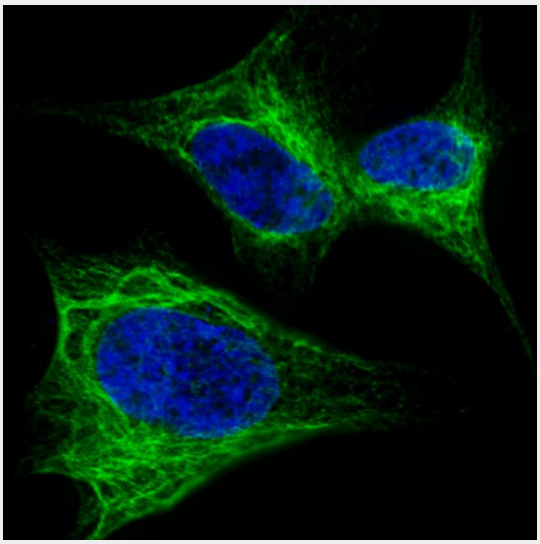
Target/Specificity
This Nestin antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1389-1416 amino acids from human Nestin.

Dilution
IF~~1:25
WB~~1:2000
IHC-P~~1:25
FC~~1:25

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Nestin Antibody (S1409) is for research use only and not for use in diagnostic or therapeutic procedures.



Fluorescent confocal image of SH-SY5Y cells stained with Nestin (S1409) antibody. SH-SY5Y cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AP2020d Nestin (S1409) primary antibody (1:200, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:1000, 1h). Nuclei were counterstained with Hoechst 33342 (blue) (10 µg/ml, 5 min). Note the highly specific localization of the Nestin (S1409) immunosignal to the intermediate filaments, supported by Human Protein Atlas Data (http://www.proteinatlas.org/ENSG00000132688).

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Nestin Antibody (S1409) - Protein Information

Name NES

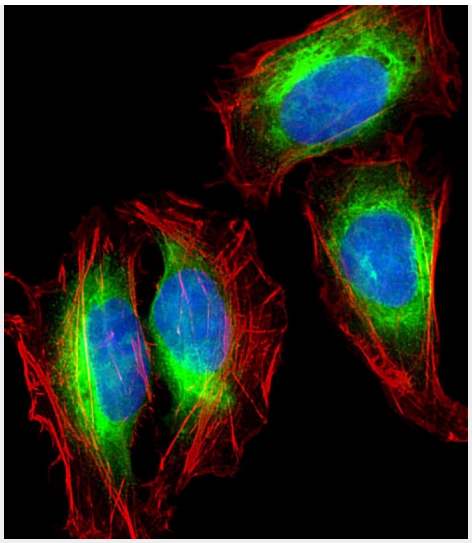
Function
Required for brain and eye development. Promotes the disassembly of phosphorylated vimentin intermediate filaments (IF) during mitosis and may play a role in the trafficking and distribution of IF proteins and other cellular factors to daughter cells during progenitor cell division. Required for survival, renewal and mitogen- stimulated proliferation of neural progenitor cells (By similarity).

Tissue Location
CNS stem cells.

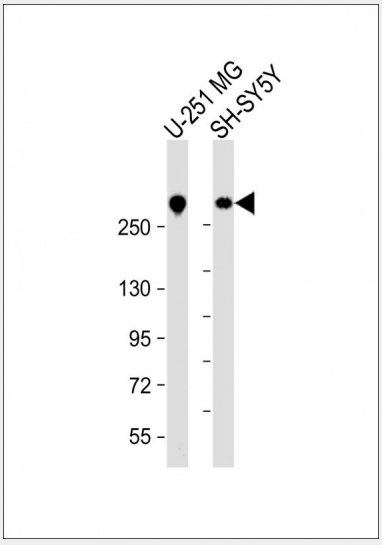
Nestin Antibody (S1409) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture



Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized U-2 OS (human bone osteosarcoma cell line) cells labeling Nestin with AP2020d at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-rabbit IgG (NK179883) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoskeleton staining on U-2 OS cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin (PD18466410) at 1/100 dilution (red).The nuclear counter stain is DAPI (blue).



All lanes : Anti-Nestin Antibody (S1409) at 1:2000 dilution Lane 1: U-251 MG whole cell lysate Lane 2: SH-SY5Y whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 177 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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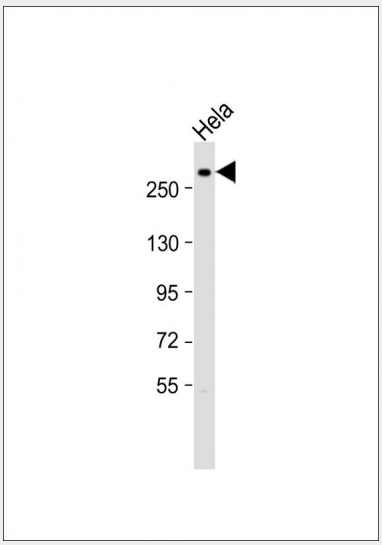
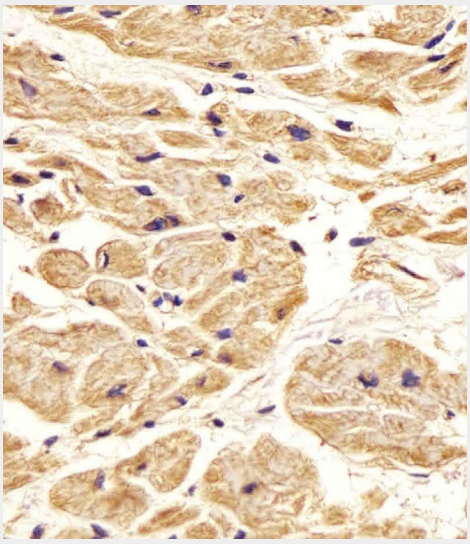
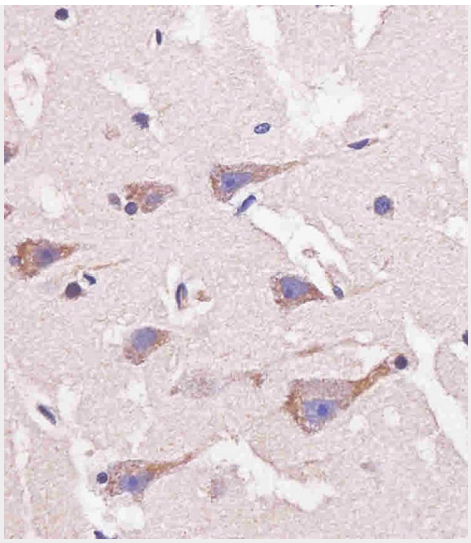


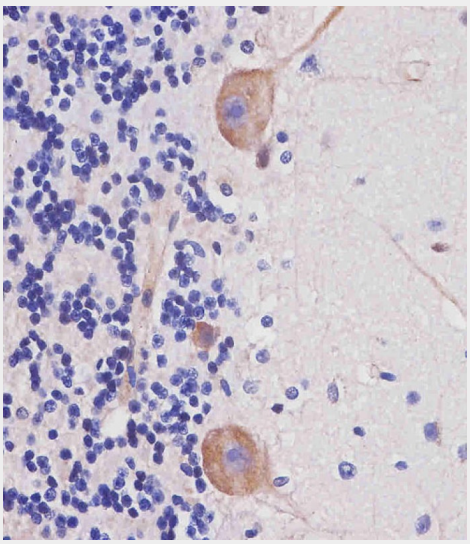
Anti-Nestin Antibody (S1409) at 1:2000 dilution + Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 177 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



AP2020d staining Nestin in Human heart tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

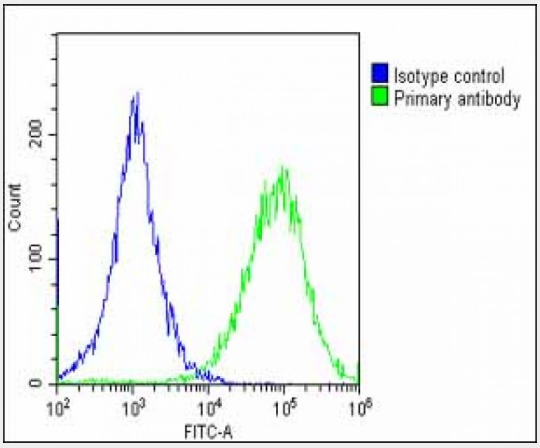


AP2020D staining Nestin in human brain tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

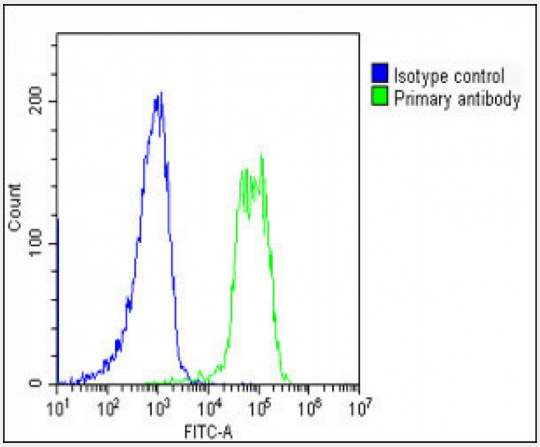


AP2020D staining Nestin in human cerebellum tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary

antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



Overlay histogram showing HepG2 cells stained with AP2020d(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP2020d, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OE188374) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



Overlay histogram showing SH-SY5Y cells stained with AP2020d(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then

icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP2020d, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OH191631) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

Nestin Antibody (S1409) - Background

Nestin is a class VI intermediate filament protein expressed predominantly in stem cells of the neural tube but absent from virtually all differentiated CNS cells. In the CNS, nestin is downregulated upon differentiation and replaced by neurofilaments. Transient expression of nestin has been postulated as a key step committing cells to the neural differentiation pathway. Nestin expression has also been observed in pancreatic hematopoietic stem cell populations.

Nestin Antibody (S1409) - References

References for protein
1.Yaworsky, P.J., et al., Dev. Biol. 205(2):309-321 (1999).
2.Dahlstrand, J., et al., J. Cell. Sci. 103 (Pt 2), 589-597 (1992).
References for SY5Y (SH-SY5Y; ATCC#CRL-2266): 1. Ross RA, et al. Coordinate morphological and biochemical interconversion of human neuroblastoma cells. J. Natl. Cancer Inst. 71: 741-749, 1983. [PubMed: 6137586]; 2. Biedler JL, et al. Multiple neurotransmitter synthesis by human neuroblastoma cell lines and clones. Cancer Res. 38: 3751-3757, 1978. [PubMed: 29704].

Nestin Antibody (S1409) - Citations

- Multivoxel magnetic resonance spectroscopy identifies enriched foci of cancer stem-like cells in high-grade gliomas.