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Nestin Antibody (S1409)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2020D

Product Information

Application	IF, WB, IHC-P, FC, E
Primary Accession	P48681
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	177439
Antigen Region	1389-1416

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~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
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.

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.

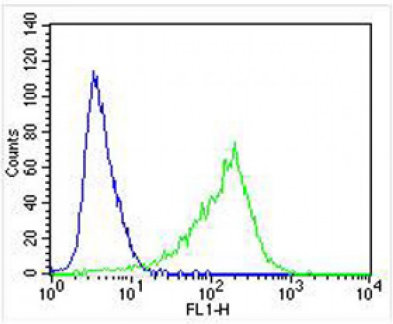
Background

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.

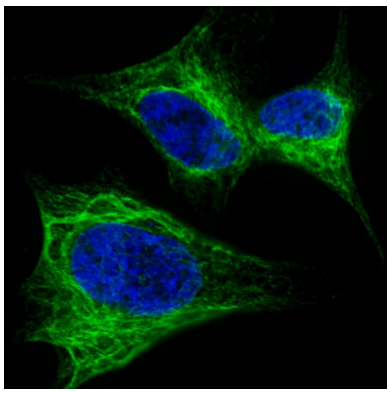
References

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].

Images

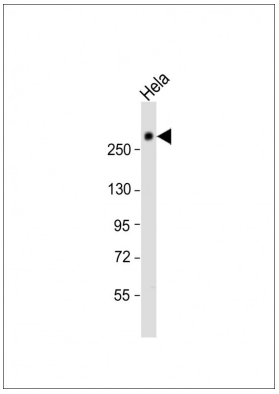


Overlay histogram showing SH-SY5Y cells stained with AP2020d (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by 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 1/400 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

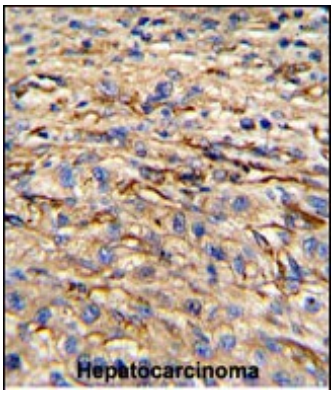


Fluorescent confocal image of SH-SY5Y cells stained with Nestin (S1409) antibody. SH-SY5Y cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AP2020d Nestin (S1409) primary antibody (1:200, 2 h at room temperature). For secondary antibody, 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).

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.



Formalin-fixed and paraffin-embedded human hepatocarcinoma reacted with Nestin Antibody (S1409), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Citations

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

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.