abcam

Product datasheet

Anti-Nestin antibody [2C1.3A11] ab18102

KO VALIDATED

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Overview

Product name	Anti-Nestin antibody [2C1.3A11]
Description	Mouse monoclonal [2C1.3A11] to Nestin
Host species	Mouse
Tested applications	**Suitable for:** ICC/IF, WB, Flow Cyt, IHC-P
Species reactivity	**Reacts with:** Human **Does not react with:** Rat
Immunogen	A 150 amino acid fragment from the cloned human Nestin.
General notes	This highly specific antibody to human nestin can aid in characterizing progenitor cells differentiating into distinct lineages, in enhancing the therapeutic potential of human neural stem/progenitor cells in the treatment of CNS diseases or injury, and in identifying neuroepithelial tumor cells. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.1% Sodium azide Constituent: PBS
Purity	Protein G purified
Primary antibody notes	This highly specific antibody to human nestin can aid in characterizing progenitor cells

	differentiating into distinct lineages, in enhancing the therapeutic potential of human neural stem/progenitor cells in the treatment of CNS diseases or injury, and in identifying neuroepithelial tumor cells.
Clonality	Monoclonal
Clone number	2C1.3A11
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab18102 in the following tested applications.

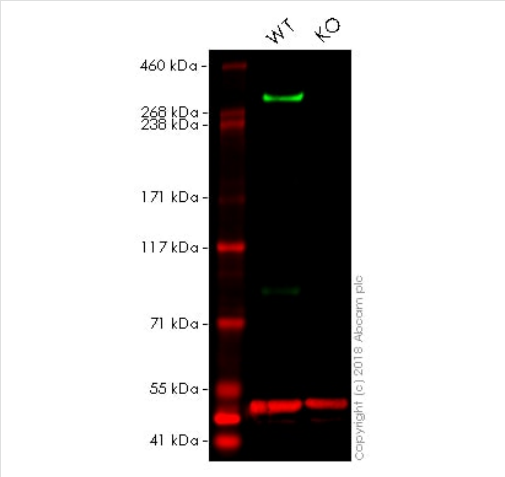
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		1/100 - 1/500.
WB		1/1000 - 1/5000. Predicted molecular weight: 177 kDa.
Flow Cyt	★★★★★ **(1)**	1/200. **ab170190** - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
IHC-P		Use at an assay dependent concentration.

Target

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.
Tissue specificity	CNS stem cells.
Sequence similarities	Belongs to the intermediate filament family.
Developmental stage	Upon terminal neural differentiation, nestin is down-regulated and replaced by neurofilaments.
Post-translational modifications	Constitutively phosphorylated. This increases during mitosis when the cytoplasmic intermediate filament network is reorganized.

Images



Western blot - Anti-Nestin antibody [2C1.3A11] (ab18102)

All lanes : Anti-Nestin antibody [2C1.3A11] (ab18102) at 1/5000 dilution

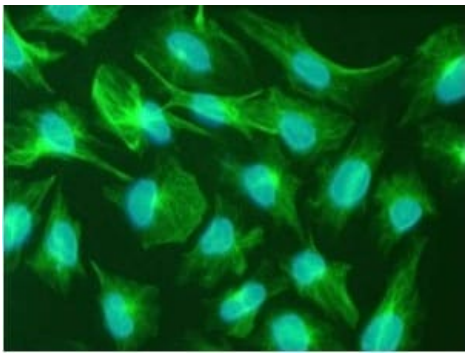
Lane 1 : Wild-type HAP1 whole cell lysate
Lane 2 : NES knockout HAP1 whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 177 kDa

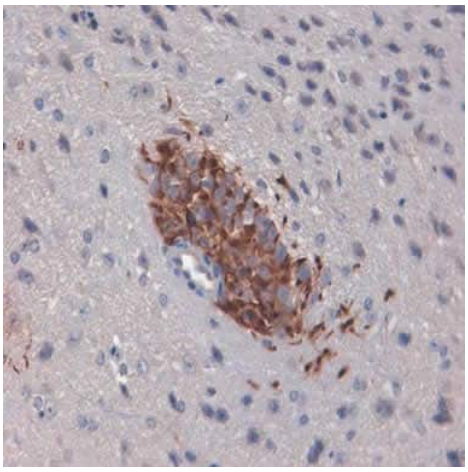
Lanes 1 - 2: Merged signal (red and green). Green - ab18102 observed at 300 kDa. Red - loading control, **ab176560**, observed at 50 kDa.

ab18102 was shown to recognize NES in wild-type HAP1 cells as signal was lost at the expected MW in NES knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and NES knockout samples were subjected to SDS-PAGE. Ab18102 and **ab176560** (Rabbit anti-alpha Tubulin loading control) were incubated overnight at 4°C at 1/5000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed **ab216772** and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed **ab216777** secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



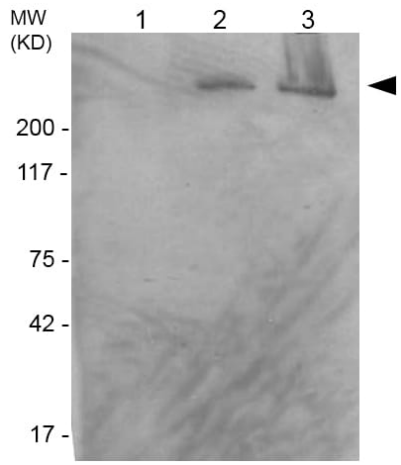
Immunocytochemistry/ Immunofluorescence - Anti-Nestin antibody [2C1.3A11] (ab18102)

Immunofluorescence staining of U251 cells (glioblastoma cell line) stained using ab18102(green) and bisbenzimide (blue)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nestin antibody [2C1.3A11] (ab18102)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of migrating tumor cells labelling Nestin with ab18102 at 2µg/ml. Cytoplasm and membrane positive staining shown.

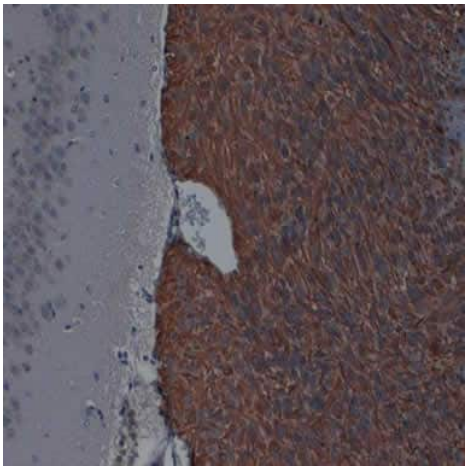


Western blot - Anti-Nestin antibody [2C1.3A11] (ab18102)

All lanes : Anti-Nestin antibody [2C1.3A11] (ab18102) at 1/1000 dilution

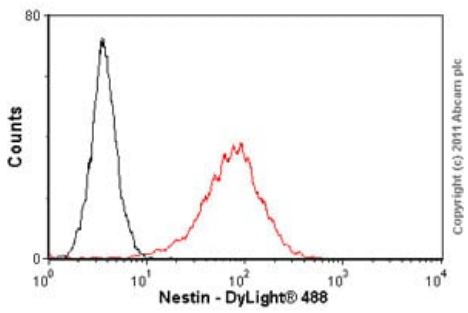
Lane 1 : Total rat brain protein at 5 µg
Lane 2 : Human CNS progenitor cell protein at 1 µg
Lane 3 : Human CNS progenitor cell protein at 5 µg

Predicted band size: 177 kDa



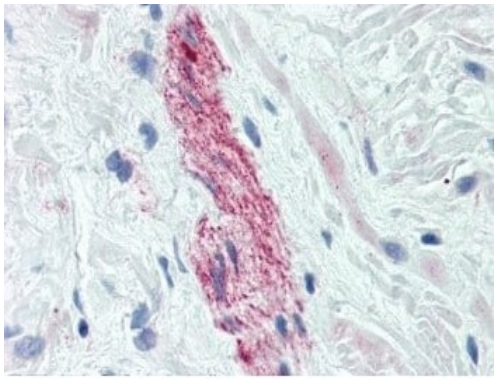
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nestin antibody [2C1.3A11] (ab18102)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of xenograft tumor cells labelling Nestin with ab18102.



Flow Cytometry - Anti-Nestin antibody [2C1.3A11] (ab18102)

Overlay histogram showing SH-SY5Y cells stained with ab18102 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab18102, 1/200 dilution) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (**ab91353**, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nestin antibody [2C1.3A11] (ab18102)

Immunohistochemistry of Anti-Nestin on formalin fixed paraffin embedded prostate nerve tissue using ab18102

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