abcam

ab271870

Anti-Nestin antibody [SP103] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	SP103
Purification technique	Affinity purification Protein A/G
Concentration	0.982 - 1.01 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Dog
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	Antigen retrieval: Boil tissue section in 10mM citrate buffer, pH 6.0 for 10 min followed by cooling at room temperature for 20 min.

Predicted

Species	Dog
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Dog
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Dog
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Dog
Dilution info	-
Notes	-

Target data

See full target information 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).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab271870 is the carrier-free version of ab105389.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Nestin also known as NES is an intermediate filament protein with a molecular weight of about 220 kDa. Nestin features prominently in cells related to the nervous system including neural stem cells and it serves as a structural component in these cells. Nestin also appears in substantial amounts during the development of the nervous system and is important for cell structural organization. It is often used as a Nestin marker in research particularly with

	Nestin antibodies for identifying the presence of neural stem cells and tracking their developmental course. Researchers frequently utilize techniques like Nestin IHC (immunohistochemistry) and Nestin western blot to stain and detect Nestin allowing detailed investigations into its expression in various tissues.
Biological function summary	Nestin plays a significant role in the dynamic remodeling of the cytoskeleton. It does not act as a solitary element but forms part of a larger protein complex involved in maintaining and organizing cellular structure. This property grants cells flexibility in shape and resilience during the rapid changes in development and specialization. The role of Nestin in the cellular architecture allows it to contribute to processes such as cell migration and proliferation critical during tissue development and repair.
Pathways	Nestin integrates into networks that regulate stem cell behavior and neurogenesis. It tightly interacts within the pathways involving cell cycle regulation and differentiation. For example the Wnt and Notch signaling pathways modulate its expression to influence neural stem cell fate and patterning during development. Protein interactions between Nestin and other cytoskeletal elements like vimentin facilitate its roles in these pathways adapting the cellular environment for specific developmental activities.
Associated diseases and disorders	Nestin associates with various pathological conditions including brain tumors and muscular dystrophies. Its expression is aberrant in many forms of gliomas where it often signifies a higher grade of malignancy. Within these tumors Nestin connects to oncogenic signaling pathways involving proteins such as the epidermal growth factor receptor (EGFR). Moreover in muscular dystrophies Nestin's expression in regenerating muscle fibers illustrates its involvement in cellular repair mechanisms potentially interacting with dystrophin a protein important for muscle integrity. Research on anti-Nestin antibodies continues to clarify its role in these diseases potentially offering diagnostic or therapeutic insights.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

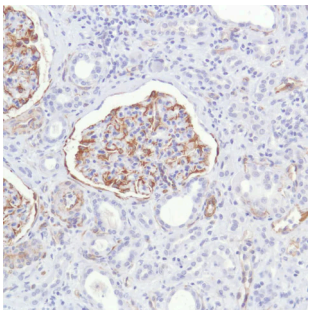
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

13 product images

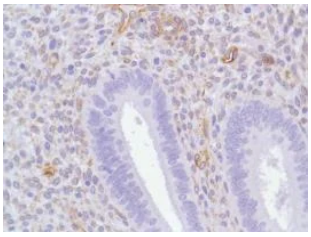


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nestin antibody [SP103] - BSA and Azide free (ab271870)

Nestin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Nestin antibody

Formalin-fixed, paraffin-embedded human kidney tissue stained for Nestin using ab105389 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab105389).

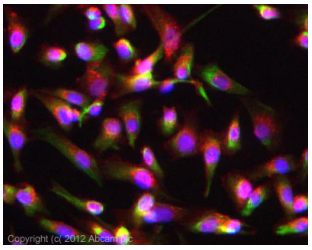


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nestin antibody [SP103] - BSA and Azide free (ab271870)

Nestin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Nestin antibody

Formalin-fixed, paraffin-embedded human endometrium tissue stained for Nestin using ab105389 at 1/100 dilution in immunohistochemical analysis.

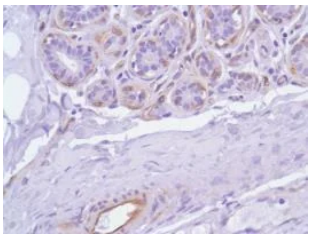
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab105389).



Immunocytochemistry/ Immunofluorescence - Anti-Nestin antibody [SP103] - BSA and Azide free (ab271870)

Nestin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Nestin antibody

ICC/IF image of ab105389 stained SKNSH cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab105389, 1/200 dilution) overnight at +4°C. The secondary antibody (green) was ab96899, DyLight® 488 goat anti-rabbit IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab105389).

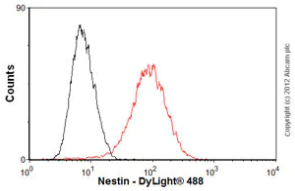


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nestin antibody [SP103] - BSA and Azide free (ab271870)

Nestin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Nestin antibody

Formalin-fixed, paraffin-embedded human breast tissue stained for Nestin using ab105389 at 1/100 dilution in immunohistochemical analysis.

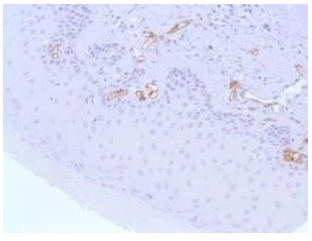
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab105389).



Flow Cytometry (Intracellular) - Anti-Nestin antibody [SP103] - BSA and Azide free (ab271870)

Nestin Flow Cytometry (Intracellular) staining using rabbit Anti-Nestin antibody

Overlay histogram showing SH-SY5Y cells stained with ab105389 (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 (ab105389 1/50 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10^6 cells) used under the same conditions. Acquisition of >5000 events was performed.
This data was developed using the same antibody clone in a different buffer formulation containing PBS BSA glycerol and sodium azide (ab105389).

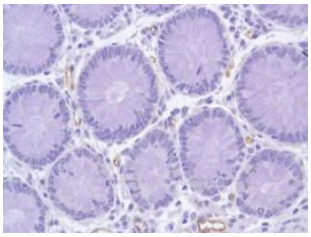


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nestin antibody [SP103] - BSA and Azide free (ab271870)

Nestin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Nestin antibody

Formalin-fixed, paraffin-embedded human skin tissue stained for Nestin using ab105389 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab105389).

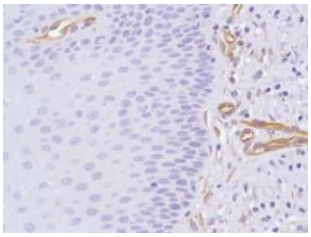


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nestin antibody [SP103] - BSA and Azide free (ab271870)

Nestin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Nestin antibody

Formalin-fixed, paraffin-embedded human colon tissue stained for Nestin using ab105389 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab105389).

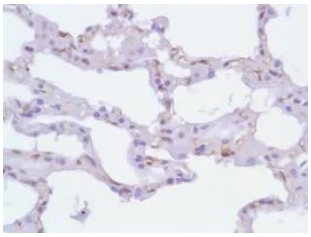


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nestin antibody [SP103] - BSA and Azide free (ab271870)

Nestin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Nestin antibody

Formalin-fixed, paraffin-embedded human cervix tissue stained for Nestin using ab105389 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab105389).

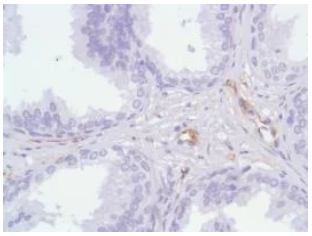


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nestin antibody [SP103] - BSA and Azide free (ab271870)

Nestin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Nestin antibody

Formalin-fixed, paraffin-embedded human lung tissue stained for Nestin using ab105389 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab105389).

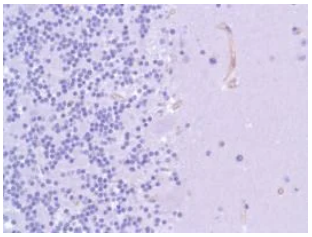


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nestin antibody [SP103] - BSA and Azide free (ab271870)

Nestin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Nestin antibody

Formalin-fixed, paraffin-embedded human prostate tissue stained for Nestin using ab105389 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab105389).

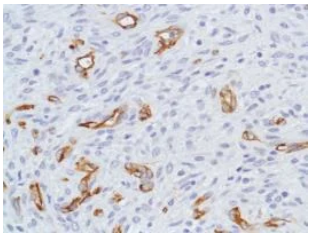


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nestin antibody [SP103] - BSA and Azide free (ab271870)

Nestin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Nestin antibody

Formalin-fixed, paraffin-embedded human cerebellum tissue stained for Nestin using ab105389 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab105389).

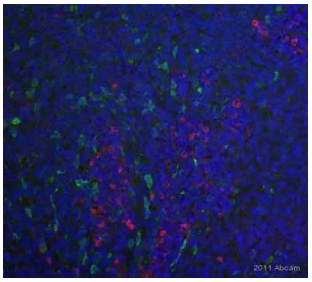


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nestin antibody [SP103] - BSA and Azide free (ab271870)

Nestin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Nestin antibody

Formalin-fixed, paraffin-embedded human ovary tissue stained for Nestin using ab105389 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab105389).



This image is courtesy of Hongwei Shao by customer review.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nestin antibody [SP103] - BSA and Azide free (ab271870)

Nestin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Nestin antibody

ab105389 staining Nestin in human melanoma tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).

Tissue was fixed in formaldehyde and a heat mediated antigen retrieval step was performed using Tris EDTA pH 9.0. Samples were then permeabilized using 0.25% Triton X-100, blocked, then

incubated with ab105389 at a 1/100 dilution for 18 hours at 4°C. The secondary used was an Alexa-Fluor 594 (red) conjugated donkey anti-rabbit polyclonal used at a 1/100 dilution. (Green) tumor cells, (blue) DAPI.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab105389).

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