abcam

ab101690

Anti-Stathmin 1 antibody [SP49]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.6 Preservative: 0.1% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	SP49
Purification technique	Affinity purification Protein A/G
Purification notes	Purified from TCS by protein A/G.

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	In details: boil tissue section in 10mM Citrate buffer, pH 6.0 for 10-20 min followed bycooling at RT for 20 min. Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat, Chicken, Cow, Dog, Pig
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

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

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

Predicted

Species	Rat, Chicken, Cow, Dog, Pig
Dilution info	-
Notes	-

WB

Tested

Species	Mouse

Dilution info	-
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat, Chicken, Cow, Dog, Pig
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat, Chicken, Cow, Dog, Pig
Dilution info	-
Notes	-

Target data

See full target information STMN1

Function	Involved in the regulation of the microtubule (MT) filament system by destabilizing microtubules. Prevents assembly and promotes disassembly of microtubules. Phosphorylation at Ser-16 may be required for axon formation during neurogenesis. Involved in the control of the learned and innate fear (By similarity).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Supplementary info

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

Activity summary	Stathmin 1 also known as Oncoprotein 18 (Op18) is a cytoplasmic phosphoprotein weighing approximately 19 kDa. It functions primarily by regulating microtubule dynamics; it destabilizes microtubules and promotes depolymerization. Stathmin 1 achieves this by binding to tubulin heterodimers preventing their polymerization into microtubules. This protein is widely expressed in neurons immune cells and various cancer cell lines indicating its significant role in cellular processes.
Biological function summary	Stathmin 1 is important in cell cycle regulation and cell signaling. It does not operate as part of a larger protein complex but rather exerts its effects directly on microtubules. By overriding the stabilization of microtubules it ensures proper mitotic spindle function. This action is especially significant during the G2/M transition and mitosis contributing to the precise segregation of chromosomes.
Pathways	The regulation of microtubule dynamics by Stathmin 1 plays an important role in cell division and neuronal development. It is involved in the PI3K/AKT signaling pathway which ensures cell survival and proliferation. Stathmin 1 interacts with other regulatory proteins such as Tau which stabilizes microtubules offering a balance between dynamic instability and stabilization. This interaction highlights its involvement in cytoskeletal reorganization essential for both cancer progression and neuronal function.
Associated diseases and disorders	The altered expression of Stathmin 1 is often associated with various cancers including breast and ovarian cancers. Overexpression leads to enhanced tumor growth and metastasis. It also plays a role in neurological disorders by affecting neuronal microtubules making it of particular interest in research on neurodegenerative diseases like Alzheimer's. Its interaction with proteins like Tau

in the brain further connects it to these disorders as both are involved in microtubule modulation important for maintaining cell structure and function.

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

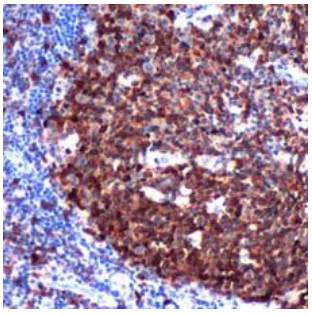
We do not recommend this combination. It is not covered by our product promise.

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.

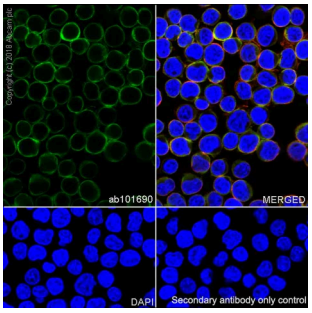
7 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Stathmin 1 antibody [SP49] (ab101690)

Stathmin 1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Stathmin 1 antibody

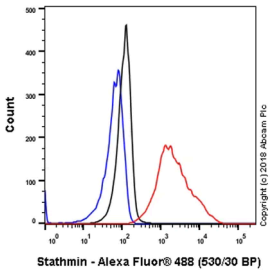
ab101690 at 1/100 dilution staining Stathmin 1 in formalin-fixed, paraffin-embedded Human tonsil by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).



Immunocytochemistry/ Immunofluorescence - Anti-Stathmin 1 antibody [SP49] (ab101690)

Stathmin 1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Stathmin 1 antibody

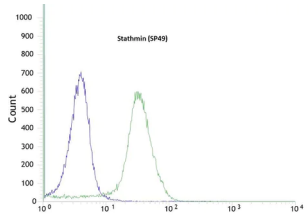
Immunocytochemistry/ Immunofluorescence analysis of Jurkat (human T cell leukemia T lymphocyte) cells labeling Stathmin 1 with purified ab101690 at 1/500 (0.6 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/ml) dilution. DAPI was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Flow Cytometry (Intracellular) - Anti-Stathmin 1 antibody [SP49] (ab101690)

Stathmin 1 Flow Cytometry (Intracellular) staining using rabbit Anti-Stathmin 1 antibody

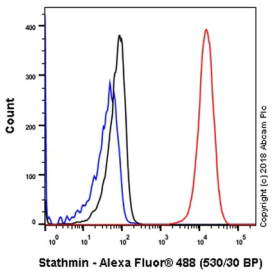
Flow cytometry analysis of HepG2 (human liver hepatocellular carcinoma cell line) labeling Stathmin 1 with purified ab101690 (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as a secondary antibody. Isotype control -Rabbit monoclonal IgG (ab172730) (Black). Unlableled control -Unlabelled cells (blue).



Flow Cytometry (Intracellular) - Anti-Stathmin 1 antibody [SP49] (ab101690)

Stathmin 1 Flow Cytometry (Intracellular) staining using rabbit Anti-Stathmin 1 antibody

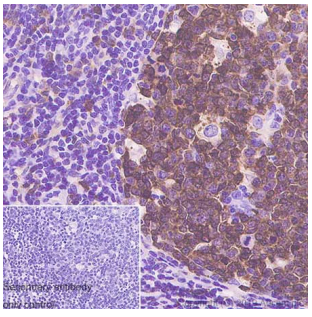
Flow cytometric analysis of rabbit anti-Stathmin 1 (SP49) antibody ab101690 in HeLa cells(green) compared to negative control of rabbit IgG (blue).



Flow Cytometry (Intracellular) - Anti-Stathmin 1 antibody [SP49] (ab101690)

Stathmin 1 Flow Cytometry (Intracellular) staining using rabbit Anti-Stathmin 1 antibody

Flow cytometry analysis of Jurkat (human acute T cell leukemia) labeling Stathmin 1 with purified ab101690 (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as a secondary antibody. Isotype control -Rabbit monoclonal IgG (ab172730) (Black). Unlableled control -Unlabelled cells (blue).

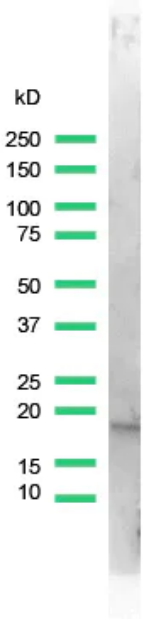


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Stathmin 1 antibody [SP49] (ab101690)

Stathmin 1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Stathmin 1 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human tonsil tissue sections labeling Stathmin 1 with Purified ab101690 at 1/400 dilution (0.29 µg/ml). Heat

mediated antigen retrieval was performed Heat mediated antigen retrieval with sodium citrate buffer (pH 6.0, epitope retrieval solution 1) for 20mins. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Western blot - Anti-Stathmin 1 antibody [SP49] (ab101690)

All lanes:
Western blot - Anti-Stathmin 1 antibody [SP49] (ab101690) at 1/25 dilution

All lanes:
lysate prepared from NIH3T3 cells

Predicted band size: 17 kDa

Observed band size: 18 kDa

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