abcam

ab236223

Anti-Stathmin 1 antibody [SP49] - BSA and Azide free

Recombinant | RabMAb

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	SP49
Purification technique	Affinity purification Protein A/G
Concentration	1.028 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS by protein A/G.

Reactivity data

IHC-P

Tested

Species	Human

Dilution info	-
Notes	Boil tissue section in 10mM Citrate buffer, pH 6.0 for 10-20 min followed bycooling at RT for 20 min.

Expected

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

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	-
Notes	-

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

Species	Mouse
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	-

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

Notes

ab236223 is the carrier-free version of ab101690.

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	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.

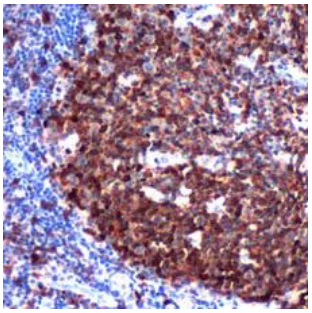
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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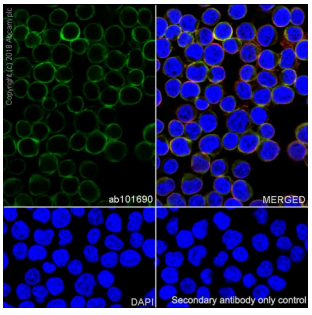
6 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Stathmin 1 antibody [SP49] - BSA and Azide free (ab236223)

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

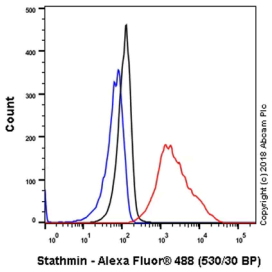
ab101690 at 1/100 dilution staining Stathmin 1 in formalin-fixed, paraffin-embedded Human tonsil by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA and sodium azide (ab101690).



Immunocytochemistry/ Immunofluorescence - Anti-Stathmin 1 antibody [SP49] - BSA and Azide free (ab236223)

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

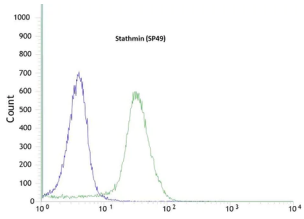
Immunocytochemistry/ Immunofluorescence analysis of Jurkat (human T cell leukemia T lymphocyte) cells labeling Stathmin 1 with purified ab101690 at 1/500 (0.6 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with ab195889 Anti-alpha Tubulin 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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab101690).



Flow Cytometry (Intracellular) - Anti-Stathmin 1 antibody [SP49] - BSA and Azide free (ab236223)

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

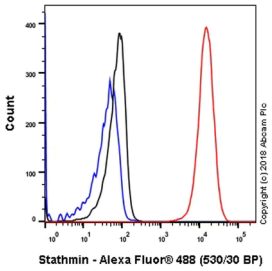
Intracellular Flow Cytometry analysis of HepG2 (human liver hepatocellular carcinoma cell line) labeling Stathmin 1 with purified ab101690 at 1/40 dilution (7.48µg/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as a secondary antibody. Isotypecontrol - Rabbit monoclonal IgG (ab172730) (black). Unlableled control - Unlabelled cells (blue). This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab101690).



Flow Cytometry (Intracellular) - Anti-Stathmin 1 antibody [SP49] - BSA and Azide free (ab236223)

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

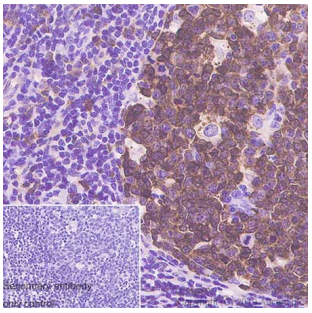
Intracellular flow cytometric analysis of rabbit anti-Stathmin 1 (SP49) antibody ab101690 (1/100) in HeLa cells (green) compared to negative control of rabbit IgG (blue).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab101690).



Flow Cytometry (Intracellular) - Anti-Stathmin 1 antibody [SP49] - BSA and Azide free (ab236223)

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

Intracellular Flow Cytometry analysis of Jurkat (human acute T cell leukemia) labeling Stathmin 1 with purified ab101690 at 1/40 dilution (7.48µg/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as a secondary antibody. Isotypecontrol - Rabbit monoclonal IgG (ab172730) (black). Unlableled control - Unlabelled cells (blue). This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab101690).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Stathmin 1 antibody [SP49] - BSA and Azide free (ab236223)

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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab101690)

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