abcam

ab221017

Anti-Stathmin 1 antibody [EP1573Y] - 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	EP1573Y
Purification technique	Affinity purification Protein A
Concentration	1.028 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Expected

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

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-

Notes	ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
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

ab221017 is the carrier-free version of ab52630.

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	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

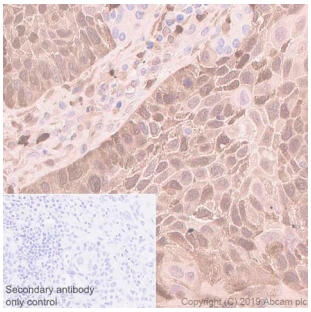
We do not recommend this combination. It is not covered by our product promise.

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.

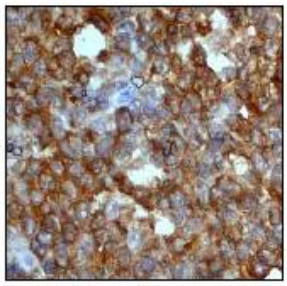
10 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Stathmin 1 antibody [EP1573Y] - BSA and Azide free (ab221017)

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

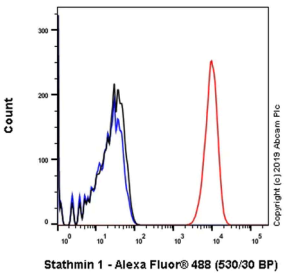
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human lung carcinoma tissue sections labeling Stathmin 1 with purified ab52630 at 1/2000 dilution (0.31 µg/ml). Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) 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 (ab52630).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Stathmin 1 antibody [EP1573Y] - BSA and Azide free (ab221017)

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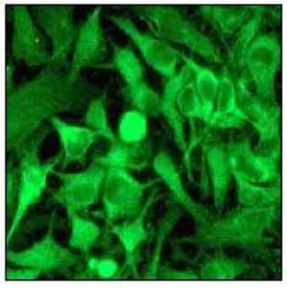
ab52630, at a 1/250 dilution, staining human Stathmin 1 in lymph node tissue, using Immunohistochemistry, Paraffin embedded sections.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52630).



Flow Cytometry (Intracellular) - Anti-Stathmin 1 antibody [EP1573Y] - BSA and Azide free (ab221017)

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

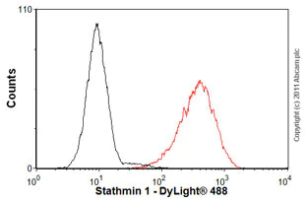
Intracellular Flow Cytometry analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labeling Stathmin 1 with purified ab52630 at 1/60 dilution (10µg/ml) (red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue). This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52630).



Immunocytochemistry/ Immunofluorescence - Anti-Stathmin 1 antibody [EP1573Y] - BSA and Azide free (ab221017)

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

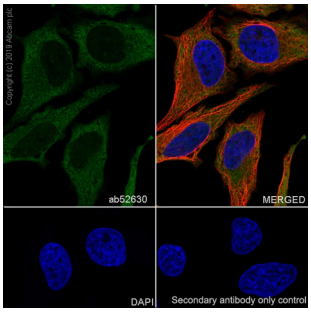
ab52630 stained HeLa cellsThis data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52630).



Flow Cytometry (Intracellular) - Anti-Stathmin 1 antibody [EP1573Y] - BSA and Azide free (ab221017)

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

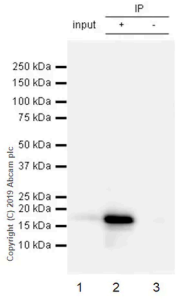
Overlay histogram showing Jurkat cells stained with ab52630 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab52630, 1/100 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 >5,000 events was performed. This antibody gave a positive signal in Jurkat cells fixed with 4% paraformaldehyde/permeabilized in 0.1% PBS-Tween used under the same conditions. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52630).



Immunocytochemistry/ Immunofluorescence - Anti-Stathmin 1 antibody [EP1573Y] - BSA and Azide free (ab221017)

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

Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Stathmin 1 with purified ab52630 at 1/200 dilution (3.1 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at 1/200 (2.5 µg/ml) dilution. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/ml) dilution. DAPI (blue) 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 (ab52630).



Immunoprecipitation - Anti-Stathmin 1 antibody [EP1573Y] - BSA and Azide free (ab221017)

ab52630 (purified) at 1/30 dilution (2ug) immunoprecipitating Stathmin 1 in HeLa whole cell lysates.
Lane 1: HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates 10ug
Lane 2 (+): ab52630 & HeLa whole cell lysates
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab52630 in HeLa whole cell lysates
For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52630).

All lanes:
Immunoprecipitation - Anti-Stathmin 1 antibody [EP1573Y] (ab52630)

Predicted band size: 17 kDa

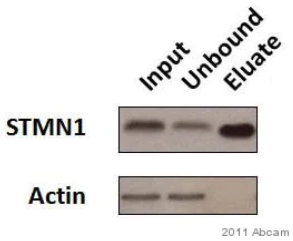
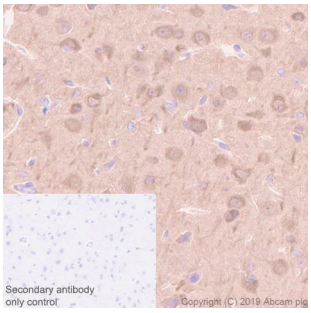


Image courtesy of Qifeng Lin by customer review.

Immunoprecipitation - Anti-Stathmin 1 antibody [EP1573Y] - BSA and Azide free (ab221017)

Whole cell lysate prepared from human colon cells was loaded at 20µg. The immunoprecipitation step was performed using Protein A/G. ab52630 used at a 1/200 dilution for 12 hours at 4°C. For WB ab52630 used at a 1/10000 dilution.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52630).
All lanes:
Immunoprecipitation - Anti-Stathmin 1 antibody [EP1573Y] (ab52630)

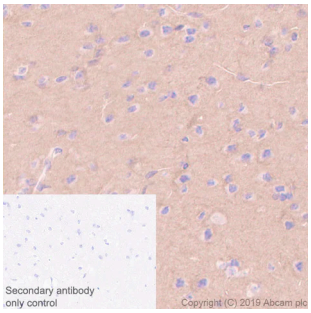
Predicted band size: 17 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Stathmin 1 antibody [EP1573Y] - BSA and Azide free (ab221017)

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 Rat brain tissue sections labeling Stathmin 1 with purified ab52630 at 1/2000 dilution (0.31 µg/ml). Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) 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 (ab52630).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Stathmin 1 antibody [EP1573Y] - BSA and Azide free (ab221017)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Mouse brain tissue sections labeling Stathmin 1 with purified ab52630 at 1/2000 dilution (0.31 µg/ml). Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) 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 (ab52630).

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