abcam

## ab52630

# Anti-Stathmin 1 antibody [EP1573Y]

Anti-Stathmin 1 antibody [EP1573Y] (ab52630) is a rabbit monoclonal antibody detecting Stathmin 1 in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 40 publications
- Trusted since 2007

Recombinant | RabMAb | 20ul selling size

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Clone number** | EP1573Y |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.596 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## IP

**Tested**

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/30 |
| **Notes** | **For unpurified use at 1/50** |

### Expected

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

## WB

### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/10000 |
| **Notes** | **For unpurified use at 1/50000** |

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | 1/10000 |
| **Notes** | **For unpurified use at 1/50000** |

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/10000 |
| **Notes** | **For unpurified use at 1/50000** |

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/100 - 1/250 |
| **Notes** | - |

### Expected

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

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/60 |
| **Notes** | ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. For unpurified use at 1/100 |

### Expected

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

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/2000 |
| **Notes** | Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. |

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | 1/2000 |
| **Notes** | Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. |

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/2000 |
| **Notes** | Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. |

## 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** | -20°C |
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle |

## Notes

**What is this antibody validated in?**
Anti-Stathmin 1 antibody [EP1573Y] (ab52630) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

**Trusted by the scientific community**
Anti-Stathmin 1 [EP1573Y] (ab52630) was first used in a scientific publication in 2007 and has been cited over 40 times in peer-reviewed journals.

**Reviewed by scientists**
Anti-Stathmin 1 [EP1573Y] (ab52630) has over 5 independent reviews from customers.

**Other related products**
We have a range of other formats of antibody clone [EP1573Y] also available for your convenience: ab52630, Alexa Fluor® 488 - ab199735, Alexa Fluor® 647 - ab199812, Alexa Fluor® 594 - ab215094, Carrier free - ab221017

**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.

**Trial sizes available!**
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

## 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.

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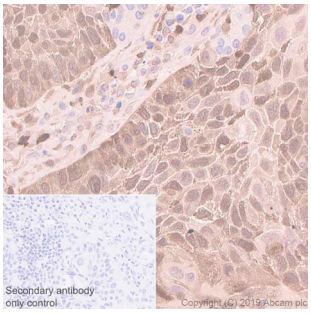
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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## 13 product images

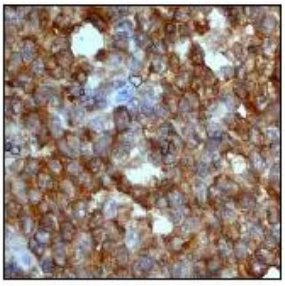



### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Stathmin 1 antibody [EP1573Y] (ab52630)

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.

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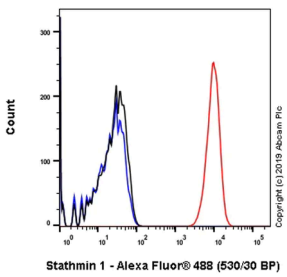


### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Stathmin 1 antibody [EP1573Y] (ab52630)

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

ab52630, at a 1/250 dilution, staining human Stathmin 1 in lymph node tissue, using Immunohistochemistry, Paraffin embedded sections.

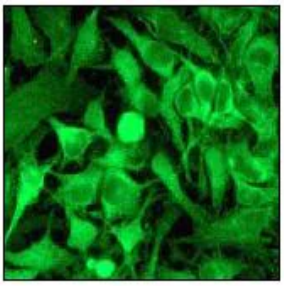
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## Flow Cytometry (Intracellular) - Anti-Stathmin 1 antibody [EP1573Y] (ab52630)

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

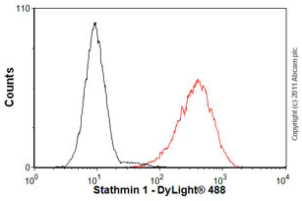
Intracellular Flow Cytometry analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labeling Stathmin 1 with purified ab52630 at 1/60 dilution (10µg/ml) (red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluorr® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



## Immunocytochemistry/ Immunofluorescence - Anti-Stathmin 1 antibody [EP1573Y] (ab52630)

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

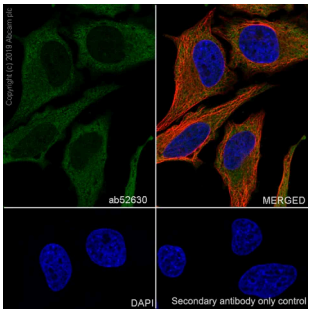
ab52630 stained HeLa cells




## Flow Cytometry (Intracellular) - Anti-Stathmin 1 antibody [EP1573Y] (ab52630)

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

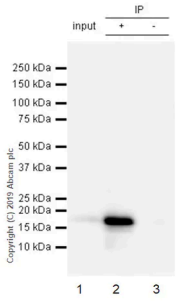
Overlay histogram showing Jurkat cells stained with ab52630 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions 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/1x$10^6$ 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.




## Immunocytochemistry/ Immunofluorescence - Anti-Stathmin 1 antibody [EP1573Y] (ab52630)

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.




## Immunoprecipitation - Anti-Stathmin 1 antibody [EP1573Y] (ab52630)

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

Predicted band size: 17 kDa

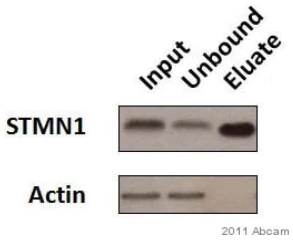
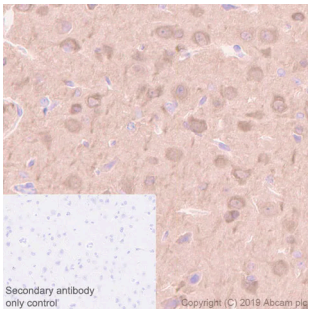



Image courtesy of Qifeng Lin by customer review.

## Immunoprecipitation - Anti-Stathmin 1 antibody [EP1573Y] (ab52630)

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

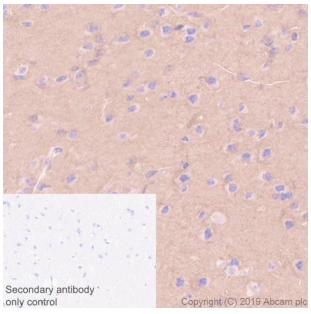
Predicted band size: 17 kDa




## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Stathmin 1 antibody [EP1573Y] (ab52630)

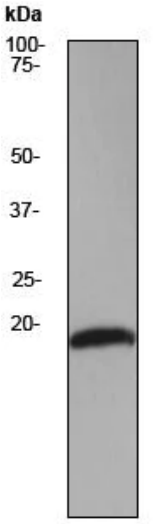
Stathmin 1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Stathmin 1 antibody

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.




## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Stathmin 1 antibody [EP1573Y] (ab52630)

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.




## Western blot - Anti-Stathmin 1 antibody [EP1573Y] (ab52630)

All lanes:
Western blot - Anti-Stathmin 1 antibody [EP1573Y] (ab52630) at 1/500000 dilution

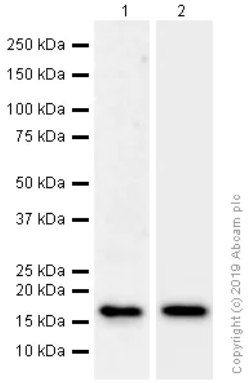
All lanes:
PC12 lysate at 10 µg

Secondary

All lanes:
goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 17 kDa

Observed band size: 18 kDa




## Western blot - Anti-Stathmin 1 antibody [EP1573Y] (ab52630)

All lanes:
Western blot - Anti-Stathmin 1 antibody [EP1573Y] (ab52630) at 1/50000 dilution

Lane 1:
Mouse brain lysates at 15 µg

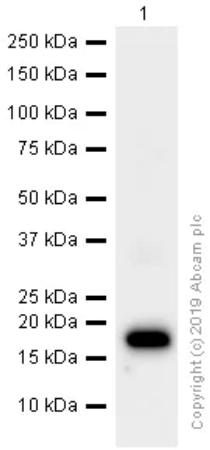
Lane 2:
PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysates at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 17 kDa

Observed band size: 18 kDa




## Western blot - Anti-Stathmin 1 antibody [EP1573Y] (ab52630)

All lanes:
Western blot - Anti-Stathmin 1 antibody [EP1573Y] (ab52630) at 1/10000 dilution

All lanes:
Human lymph node lysates at 15 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 17 kDa

Observed band size: 18 kDa

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