abcam

Product datasheet

Anti-Stathmin 1 (phospho S63) antibody [EPR1574] ab76583

Recombinant RabMAb

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Overview

Product name	Anti-Stathmin 1 (phospho S63) antibody [EPR1574]
Description	Rabbit monoclonal [EPR1574] to Stathmin 1 (phospho S63)
Host species	Rabbit
Specificity	This antibody only detects Stathmin 1 phosphorylated on Serine 62. The antibody immunogen shares 86% homology with Stathmin-2, therefore it is possible that the antibody will cross-react with Stathmin-2 when phosphorylated at serine 97. This has not been assessed experimentally.
Tested applications	**Suitable for:** Dot blot, IHC-P, WB, IP **Unsuitable for:** Flow Cyt or ICC/IF
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HeLa cell lysates treated with Calyculin A; IHC-P: human brain tissue. IP: HeLa.
General notes	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide

	Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.5% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR1574
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab76583 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Dot blot		1/1000.
IHC-P		1/250 - 1/500. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
WB	★★★★☆ (1)	1/2500 - 1/10000. Predicted molecular weight: 17 kDa.
IP		1/20.

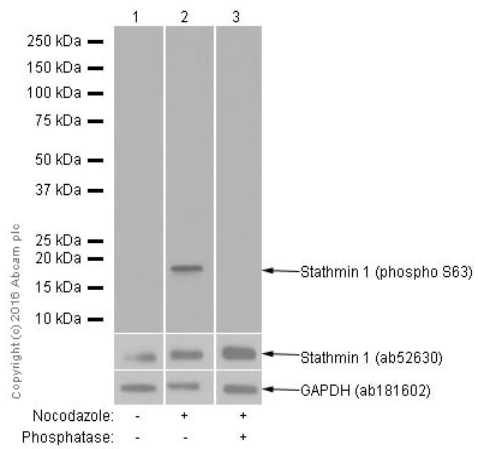
Application notes Is unsuitable for Flow Cyt or ICC/IF.

Target

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.
Tissue specificity	Ubiquitous. Expression is strongest in fetal and adult brain, spinal cord, and cerebellum, followed by thymus, bone marrow, testis, and fetal liver. Expression is intermediate in colon, ovary, placenta, uterus, and trachea, and is readily detected at substantially lower levels in all other tissues examined. Lowest expression is found in adult liver. Present in much greater abundance in cells from patients with acute leukemia of different subtypes than in normal peripheral blood lymphocytes, non-leukemic proliferating lymphoid cells, bone marrow cells, or cells from patients with chronic lymphoid or myeloid leukemia.
Sequence similarities	Belongs to the stathmin family. Contains 1 SLD (stathmin-like) domain.
Post-translational modifications	Many different phosphorylated forms are observed depending on specific combinations among the sites which can be phosphorylated. MAPK is responsible for the phosphorylation of stathmin in response to NGF. Phosphorylation at Ser-16 seems to be required for neuron polarization (By similarity). Phosphorylation at Ser-63 reduces tubulin binding 10-fold and suppresses the MT polymerization inhibition activity.
Cellular localization	Cytoplasm > cytoskeleton.

Images

Images



Western blot - Anti-Stathmin 1 (phospho S63) antibody [EPR1574] (ab76583)

All lanes : Anti-Stathmin 1 (phospho S63) antibody [EPR1574] (ab76583) at 1/1000 dilution

Lane 1 : Untreated HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysates
Lane 2 : HeLa (Human epithelial cell line from cervix adenocarcinoma) treated with nocodazole at 100 ng/mL for 18 hours. Whole cell lysates
Lane 3 : HeLa (Human epithelial cell line from cervix adenocarcinoma) treated with nocodazole at 100 ng/mL for 18 hours. Whole cell lysates. Then the membrane was incubated with phosphatase.

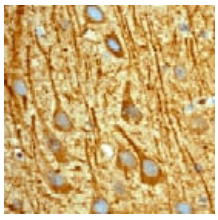
Lysates/proteins at 15 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 17 kDa
Observed band size: 17 kDa

Exposure time: 30 seconds

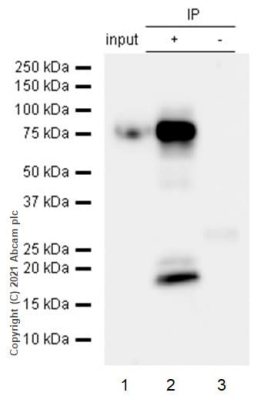
Blocking/Diluting buffer and concentration 2% BSA/TBST



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Stathmin 1 (phospho S63) antibody [EPR1574] (ab76583)

ab76583, at a 1/250 dilution, staining Stathmin 1 in paraffin embedded human brain tissue by Immunohistochemistry.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunoprecipitation - Anti-Stathmin 1 (phospho S63) antibody [EPR1574] (ab76583)

Stathmin 1 was immunoprecipitated from 0.35 mg HeLa (Human cervix adenocarcinoma epithelial cell) treated with Calyculin A whole cell lysate 10 µg with ab76583 at 1/50 dilution (2µg). VeriBlot for IP Detection Reagent (HRP)(**ab131366**) was used at 1/5000 dilution.

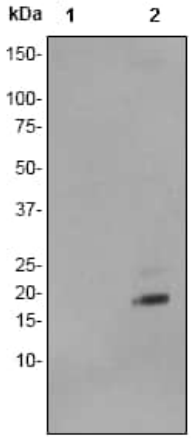
Lane 1: HeLa (Human cervix adenocarcinoma epithelial cell) treated with Calyculin A whole cell lysate 10 µg

Lane 2: ab76583 IP in HeLa treated with Calyculin A whole cell lysate

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab76583 in HeLa treated with Calyculin A whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

75kDa band could be stathmin/alpha tubulin complex. (PMID:9369201)



Western blot - Anti-Stathmin 1 (phospho S63) antibody [EPR1574] (ab76583)

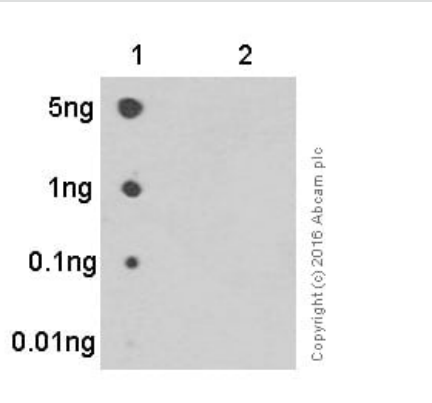
All lanes : Anti-Stathmin 1 (phospho S63) antibody [EPR1574] (ab76583) at 1/10000 dilution

Lane 1 : HeLa cell lysate, untreated
Lane 2 : HeLa cell lysate treated with Calyculin A

Lysates/proteins at 10 µg per lane.

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

Predicted band size: 17 kDa
Observed band size: 17 kDa

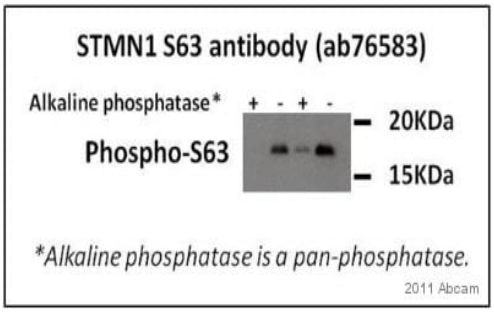


Dot Blot - Anti-Stathmin 1 (phospho S63) antibody [EPR1574] (ab76583)

Dot blot analysis of Stathmin 1 (phospho S63) phospho peptide (Lane 1) and Stathmin 1 non-phospho peptide (Lane 2) labeling Stathmin 1 (phospho S63) with ab76583 at a dilution of 1/1000. **ab97051** (Peroxidase conjugated goat anti-rabbit IgG) (H+L) at 1/100 000 was used as the secondary antibody.

Blocking and diluting buffer: 5% NFDM/TBST.

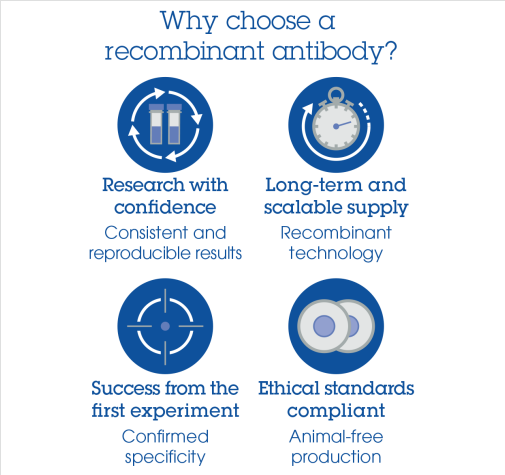
Exposure time: 3 minutes.



Western blot - Anti-Stathmin 1 (phospho S63) antibody [EPR1574] (ab76583)

Image courtesy of Qifeng Lin by Abreview.

Alkaline phosphatase treatment removes S63 phosphorylation. Samples treated with phosphatase were run alongside the normal lysate, and the phosph-S63 signal is not detected after phosphatase treatment, thus suggesting the signal is very specific to the phosphorylated S63.
Whole cell lysate prepared from a human colon cancer cell line was loaded at 20µg.
ab76583 used at a 1/1000 dilution.
Secondary used was an HRP conjugated goat anti-rabbit polyclonal used at a 1/10000 dilution.



Anti-Stathmin 1 (phospho S63) antibody [EPR1574] (ab76583)

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