abcam

ab52865

Anti-Musashi 1 / Msi1 antibody [EP1302]

Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865) is a rabbit monoclonal antibody detecting Musashi 1 / Msi1 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Chicken, Human, Mouse, Quail**.

- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency
- Over 50 publications
- Trusted since 2007

Recombinant | RabMAb | KO Validated | 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	EP1302
Purification technique	Affinity purification Protein A
Specificity	Several customers have found that this antibody gives good results in mouse and rat however in our hands, we cannot obtain positive results. This antibody is therefore no longer covered by our Abpromise guarantee for use in mouse or rat.
Concentration	0.886 - 0.931 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Quail
Dilution info	1/50 - 1/500
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Species	Human
Dilution info	1/50 - 1/500
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Expected

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

IP

Not recommended

Species	Mouse, Quail, Chicken, Human
Dilution info	-
Notes	-

WB

Tested

Species	Chicken
Dilution info	1/1000
Notes	**For unpurified use at 1/2000.**

Species	Human
Dilution info	1/1000
Notes	**For unpurified use at 1/2000.**

Expected

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

ICC/IF

Tested

Species	Mouse
Dilution info	1/250 - 1/500
Notes	-

Species	Human
Dilution info	1/250 - 1/500
Notes	-

Expected

Species	Quail, Chicken
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/80
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. For unpurified use at 1/40.

Expected

Species	Quail, Chicken, Mouse

Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information MSI1

Function	RNA binding protein that regulates the expression of target mRNAs at the translation level. Regulates expression of the NOTCH1 antagonist NUMB. Binds RNA containing the sequence 5'-GUUAGUUAGUUAGUU-3' and other sequences containing the pattern 5'-[GA]U(1-3)AGU-3'. May play a role in the proliferation and maintenance of stem cells in the central nervous system (By similarity).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
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, Stable for 12 months at -20°C

Notes

What is this antibody validated in?
Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Chicken, Human, Mouse, Quail samples.

What is the molecular weight of Musashi 1 / Msi1?
Anti-Musashi 1 / Msi1 [EP1302] (ab52865) specifically detects a band for Musashi 1 / Msi1 (UniProt: O43347) at a molecular weight of 39kDa.

Trusted by the scientific community
Anti-Musashi 1 / Msi1 [EP1302] (ab52865) was first used in a scientific publication in 2007 and has been cited over 50 times in peer-reviewed journals.

Reviewed by scientists

Anti-Musashi 1 / Msi1 [EP1302] (ab52865) has over 15 independent reviews from customers.

Specificity confirmed
The specificity of Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865) has been confirmed by Western blot testing in MSI1 Knockout HAP1 cells.

Other related products
We have a range of other formats of antibody clone [EP1302] also available for your convenience: ab52865, Alexa Fluor® 488 - ab199781, Alexa Fluor® 647 - ab199838, PE - ab210418, Carrier free - ab221797, APC - ab310871, Alexa Fluor® 594 - ab311702, Alexa Fluor® 568 - ab312977, Alexa Fluor® 555 - ab313185, Alexa Fluor® 750 - ab321668

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	Musashi 1 also known as Msi1 is an RNA-binding protein with a mass of about 39 kDa. Msi1 is present in high levels in neural tissue and certain stem cells. It works mechanically by recognizing and binding to specific RNA sequences impacting the fate of the mRNA. Musashi 1 regulates the translation and stability of its target mRNA affecting protein synthesis at the post-transcriptional level. Its expression is not limited to neural tissues but is also detected in other tissues where stem or progenitor cells are present.
Biological function summary	In neural stem cells and other tissue types Musashi 1 plays an important role in maintaining stem cell identity. Musashi 1 forms part of a complex that controls the translation of mRNAs involved in cell fate decisions. It acts by repressing or activating the translation of key regulatory proteins that guide stem cell maintenance and differentiation processes. This protein is also involved in cellular proliferation by influencing the translation of mRNAs tied to cell cycle regulation.
Pathways	The function of Musashi 1 lies within critical signaling pathways such as Notch and Wnt. It facilitates these pathways by regulating the translation of downstream effectors which are necessary for cellular communication and differentiation.

	Musashi 1 associates with proteins like Numb a known Notch signaling inhibitor and B-catenin from the Wnt pathway modulating their effects on cell cycle progression and stem cell fate.
Associated diseases and disorders	Musashi 1's abnormal expression is often linked to conditions like glioblastoma and colorectal cancer. High levels of Musashi 1 can promote tumor growth due to its role in cell proliferation and differentiation pathways. In glioblastoma its expression relates closely with other oncogenic proteins such as Numb and Notch altering normal regulatory mechanisms. In colorectal cancer Musashi 1's interaction with B-catenin further drives tumorigenesis highlighting its potential as a target for therapeutic interventions.

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

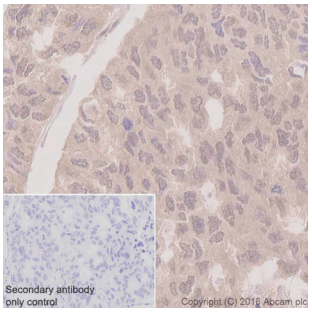
We do not recommend this combination. It is not covered by our product promise.

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.

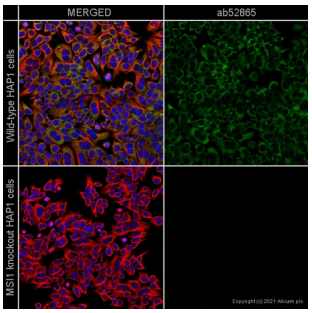
11 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865)

Musashi 1 / Msi1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Musashi 1 / Msi1 antibody

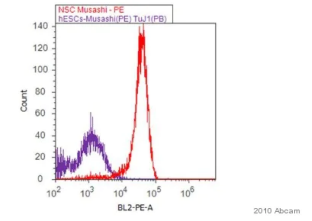
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human lung carcinoma tissue sections labeling Mushashi 1/ Msi1 with Purified ab52865 at 1:50 dilution (17.7 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ab97051 Goat Anti-Rabbit IgG H&L (HRP) secondary antibody was used at 1:500 dilution. PBS instead of the primary antibody was used as the negative control.



Immunocytochemistry/ Immunofluorescence - Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865)

Musashi 1 / Msi1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Musashi 1 / Msi1 antibody

ab52865 staining Musashi 1 / Msi1 in HAP1-MSI1 cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-Tween for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab52865 at 1µg/ml and ab7291, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with ab150081, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and ab150080, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue). Image was acquired with a confocal microscope (Leica-Microsystems TCS SP8) and a single confocal section is shown.

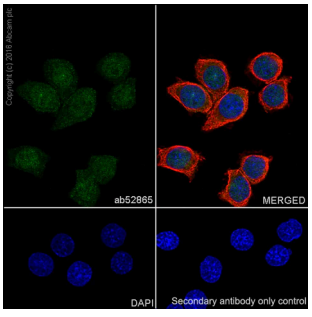


This image is courtesy of a customer review submitted by Jennifer Moore.

Flow Cytometry (Intracellular) - Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865)

Musashi 1 / Msi1 Flow Cytometry (Intracellular) staining using rabbit Anti-Musashi 1 / Msi1 antibody

Intracellular Intracellular Flow Cyt image of Musashi1 (ab52865)using Accutase digested single cell suspension of hESC (Neural stem cells derived from human embryonic). The cells were fixed and permeabilized . The cells were incubated with unpurified ab52865 (1/20 using Prem/wash solution) for 30 mins at 23°C.

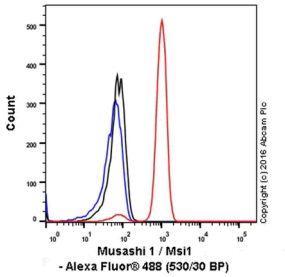


Immunocytochemistry/ Immunofluorescence - Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865)

Musashi 1 / Msi1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Musashi 1 / Msi1 antibody

Immunocytochemistry/ Immunofluorescence analysis of SH-SY5Y (Human neuroblastoma epithelial cell) cells labeling Mushashi 1/ Msi1 with Purified ab52865 at 1:500 dilution. 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) 1:200. ab150077 Goat anti rabbit IgG(Alexa Fluor® 488) was used as the secondary antibody at 1:1000

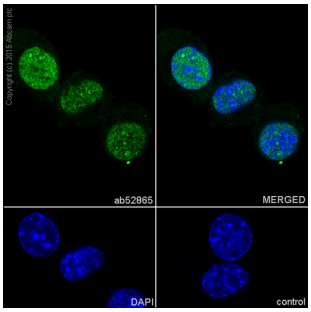
dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Flow Cytometry (Intracellular) - Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865)

Musashi 1 / Msi1 Flow Cytometry (Intracellular) staining using rabbit Anti-Musashi 1 / Msi1 antibody

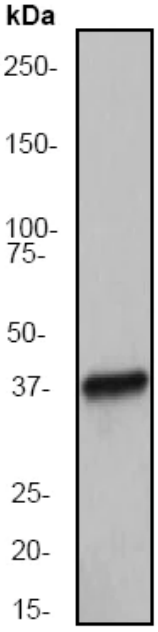
Intracellular Flow Cytometry analysis of SH-SY5Y (Human neuroblastoma epithelial cell) cells labeling Mushashi 1/ Msi1 with purified ab52865 at 1/80 dilution (10µg/ml) (red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluorr® 488) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunocytochemistry/ Immunofluorescence - Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865)

Musashi 1 / Msi1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Musashi 1 / Msi1 antibody

Immunocytochemistry/Immunofluorescence analysis of Neuro-2a (mouse neuroblastoma) labelling Musashi 1 with purified ab52865 at 1/500. Cells were fixed with 4% Paraformaldehyde and permeabilised by 0.1% tritonX-100. An Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody (ab150077). Nuclei counterstained with DAPI (blue).



Western blot - Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865)

All lanes:
Western blot - Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865) at 1/2000 dilution

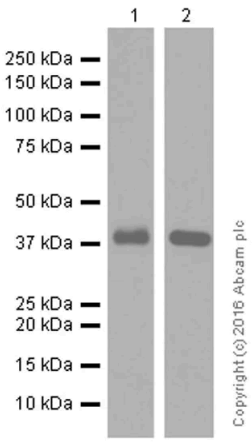
All lanes:
SH-SY-5Y cell lysate at 10 µg/mL

Secondary

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

Predicted band size: 39 kDa

Observed band size: 39 kDa



Western blot - Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865)

Musashi 1 / Msi1 Western blot staining using rabbit Anti-Musashi 1 / Msi1 antibody

Blocking and diluting buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865) at 1/1000 dilution

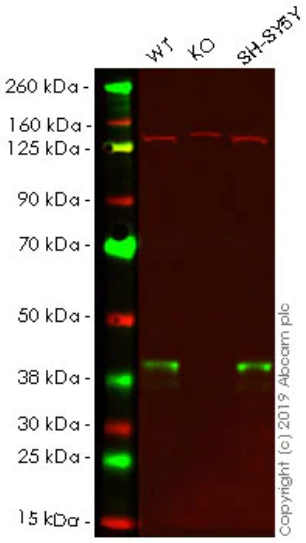
Lane 1:
SH-SY5Y (Human neuroblastoma epithelial cell) whole cell lysates at 20 µg

Lane 2:
UMNSAH/DF-1 (chicken embryo fibroblast) whole cell lysates at 20 µg

Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/2000 dilution

Predicted band size: 39 kDa



Western blot - Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865)

Musashi 1 / Msi1 Western blot staining using rabbit Anti-Musashi 1 / Msi1 antibody

Lanes 1 - 3: Merged signal (red and green). Green - ab52865 observed at 39 kDa. Red - loading control, ab130007, observed at 130 kDa.
ab52865 was shown to specifically react with Musashi 1 / Msi1 in wild-type HAP1 cells as signal was lost in MSI1 knockout cells. Wild-type and MSI1 knockout samples were subjected to SDS-PAGE. ab52865 and ab130007 (Mouse anti Vinculin loading control) were incubated overnight at 4°C at 1/2000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865) at 1/2000 dilution

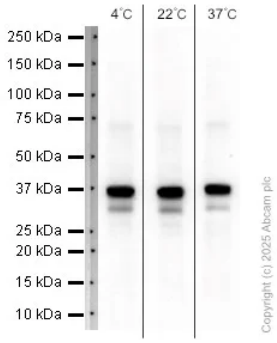
Lane 1:
Wild-type HAP1 whole cell lysate at 20 µg

Lane 2:
MSI1 knockout HAP1 whole cell lysate at 20 µg

Lane 3:
SH-SY5Y whole cell lysate at 20 µg

Predicted band size: 39 kDa

Observed band size: 39 kDa



Western blot - Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865)

Musashi 1 / Msi1 Western blot staining of SH-SY5Y whole cell lysate using rabbit Anti-Musashi 1 / Msi1 antibody

This blot was produced using 4-20% SDS-PAGE containing 15 µg of SH-SY5Y whole cell lysate per lane at 150V for 1hr before being transferred onto a 0.45 µm PVDF membrane at 75V for 1hr. The membrane was then blocked for 1hr using 5% NFDM/TBST, then incubated with ab52865 (1/1000) at room temperature for 1hr. After being washed three times in TBST, the membrane was incubated with Peroxidase conjugated goat anti-rabbit IgG (H+L) (ab97051) at 1/20,000 for 1hr at room temperature. The membrane was washed three times again. Then the signal was developed using the ECL technique.

ab52865 was stored at a range of temperatures (+4°C, +22°C, +37°C) for 1 week before being tested in WB. The image shows the band intensity remains relatively constant across all storage temperatures, demonstrating that antibody activity is not affected under these conditions. This data was generated as part of a structured antibody stability study supporting Abcam’ s transition from cold⊠chain to ambient shipping.

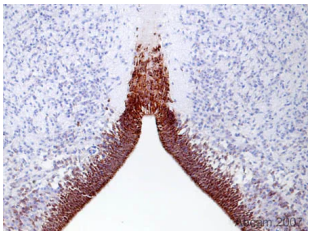
All lanes:
Western blot - Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865) at 1/1000 dilution

All lanes:
SH-SY5Y whole cell lysate at 15 µg with NDFM/TBST

Secondary

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

Exposure time: 40s



This image is courtesy of a customer review submitted by Carl Hobbs.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Musashi 1 / Msi1 antibody [EP1302] (ab52865)

Musashi 1 / Msi1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Musashi 1 / Msi1 antibody

Immunohistochemistical detection (on formaldehyde/PFA-fixed paraffin-embedded sections) of Musashi 1 / Msi1 antibody [EP1302] (unpurified ab52865) on Quail Tissue sections (embryo d5/6 Brain stem T/S). Antigen retrieval step: Heat mediated. Blocking step: 1% BSA for 10 mins at RT. Primary Antibody unpurified ab52865 incubated at 1/300 for 2 hours at RT. Secondary Antibody: Biotin labelled goat anti rabbit IgG (1/300).

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