abcam

ab221797

Anti-Musashi 1 / Msi1 antibody [EP1302] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	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	0.998 - 1.047 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Quail, Human
Dilution info	-
Notes	-

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, Human
Dilution info	-
Notes	-

Expected

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

ICC/IF

Tested

Species	Mouse, Human

Dilution info	-
Notes	-

Expected

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

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	Blue Ice

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

Notes

ab221797 is the carrier-free version of ab52865.

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.

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	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 β-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 β-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

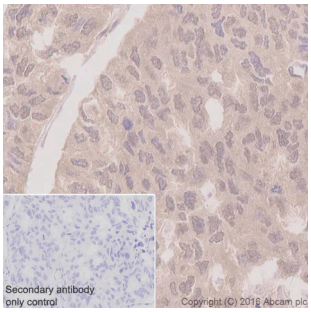
We do not recommend this combination. It is not covered by our product promise.

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.

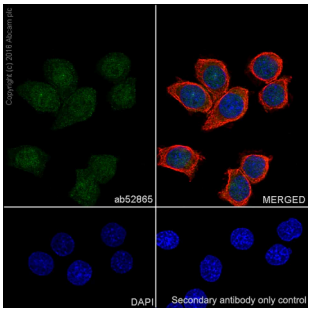
8 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Musashi 1 / Msi1 antibody [EP1302] - BSA and Azide free (ab221797)

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

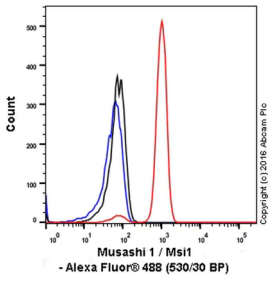
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human lung carcinoma tissue sections labeling Mushashi 1/ Msi1 with Purified ab52865 at 1:50 dilution (17.7 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). Tissue was counterstained 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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52865).



Immunocytochemistry/ Immunofluorescence - Anti-Musashi 1 / Msi1 antibody [EP1302] - BSA and Azide free (ab221797)

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

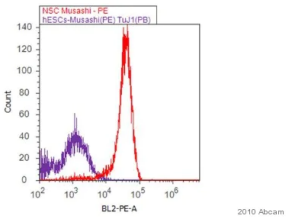
Immunocytochemistry/ Immunofluorescence analysis of SH-SY5Y (Human neuroblastoma epithelial cell) cells labeling Mushashi 1/ Msi1 with Purified ab52865 at 1:500 dilution. Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha 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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52865).



Flow Cytometry (Intracellular) - Anti-Musashi 1 / Msi1 antibody [EP1302] - BSA and Azide free (ab221797)

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 (10 µg/ml) (red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 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).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52865).

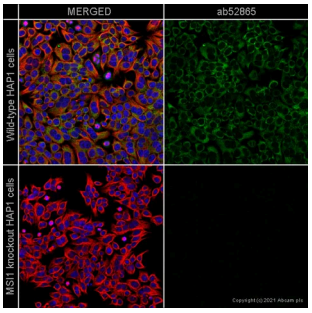


This image is courtesy of a customer review submitted by Jennifer Moore.

Flow Cytometry (Intracellular) - Anti-Musashi 1 / Msi1 antibody [EP1302] - BSA and Azide free (ab221797)

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. the cells were fixed adn permeabilized . The cells were incubated with unpurified ab52865 (1/20 using Prem/wash solution) for 30 mins at 23°C.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52865).

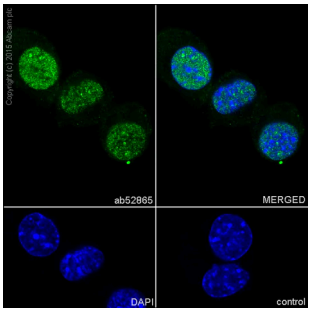


Immunocytochemistry/ Immunofluorescence - Anti-Musashi 1 / Msi1 antibody [EP1302] - BSA and Azide free (ab221797)

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

This data was developed using the same antibody clone in a different buffer formulation containing PBS and sodium azide (ab52865)
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).

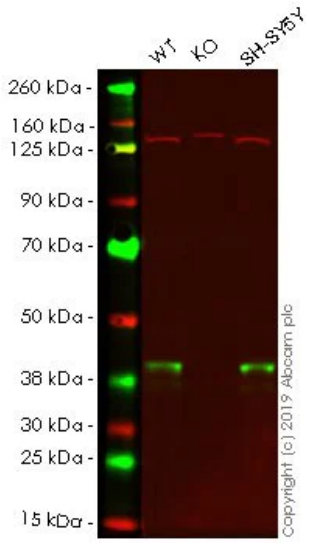
Image was acquired with a confocal microscope (Leica-Microsystems TCS SP8) and a single confocal section is shown.



Immunocytochemistry/ Immunofluorescence - Anti-Musashi 1 / Msi1 antibody [EP1302] - BSA and Azide free (ab221797)

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). This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52865).



Western blot - Anti-Musashi 1 / Msi1 antibody [EP1302] - BSA and Azide free (ab221797)

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52865).

All lanes:
Western blot - Anti-Musashi 1 / Msi1 antibody [EP1302] - BSA and Azide free (ab221797) at 1/2000 dilution

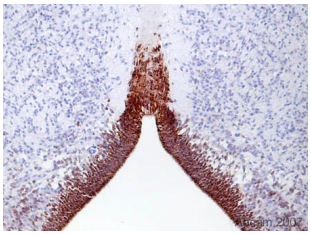
Lane 1:
Wild-type HAP1 whole cell lysate

Lane 2:
MSI1 knockout HAP1 whole cell lysate

Lane 3:
SH-SY5Y whole cell lysate

Predicted band size: 39 kDa

Observed band size: 39 kDa



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] - BSA and Azide free (ab221797)

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).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52865).

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