abcam

ab209402

Anti-SF3B3 antibody [EPR18440]

Recombinant | RabMAb

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	EPR18440
Purification technique	Affinity purification Protein A
Concentration	1.033 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/60
Notes	-

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/2000
Notes	-

Species	Rat
Dilution info	1/2000
Notes	-

Species	Human
Dilution info	1/2000
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Species	Rat
Dilution info	1/500
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.

Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/200
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/4000
Notes	-

Species	Rat
Dilution info	1/4000
Notes	-

Species	Human
Dilution info	1/4000
Notes	-

Target data

See full target information SF3B3

Function	Component of the 17S U2 SnRNP complex of the spliceosome, a large ribonucleoprotein complex that removes introns from transcribed pre-mRNAs

(PubMed:10490618, PubMed:10882114, PubMed:12234937, PubMed:27720643, PubMed:28781166, PubMed:32494006, PubMed:34822310). The 17S U2 SnRNP complex (1) directly participates in early spliceosome assembly and (2) mediates recognition of the intron branch site during pre-mRNA splicing by promoting the selection of the pre-mRNA branch-site adenosine, the nucleophile for the first step of splicing (PubMed:12234937, PubMed:32494006, PubMed:34822310). Within the 17S U2 SnRNP complex, SF3B3 is part of the SF3B subcomplex, which is required for 'A' complex assembly formed by the stable binding of U2 snRNP to the branchpoint sequence in pre-mRNA (PubMed:12234937, PubMed:27720643). Sequence independent binding of SF3A and SF3B subcomplexes upstream of the branch site is essential, it may anchor U2 snRNP to the pre-mRNA (PubMed:12234937). May also be involved in the assembly of the 'E' complex (PubMed:10882114). Also acts as a component of the minor spliceosome, which is involved in the splicing of U12-type introns in pre-mRNAs (PubMed:15146077, PubMed:33509932).

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

Notes

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.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	SF3B3 also known as SAP130 is a component of the splicing factor 3b complex vital for pre-mRNA processing. It is approximately 130 kDa in mass and prominently expressed across various tissue types including the liver lungs and heart. SF3B3 functions in the spliceosome a complex machinery essential for the removal of introns from pre-mRNA transcripts.
Biological function summary	SF3B3 participates in the assembly and stabilization of the functional spliceosomal complex. It is a part of the larger SF3b complex which is critical for recognizing the branch point sequence in RNA during splicing. This recognition influences the selection of splice sites and impacts the regulation of alternative splicing events. The SF3b complex works with the U2 small nuclear ribonucleoprotein (snRNP) during the splicing process to ensure accurate and efficient mRNA maturation.
Pathways	SF3B3 plays a significant role in the splicing pathway and impacts gene expression regulation through alternative splicing. It works alongside proteins such as SF3B1 and other splicing factors maintaining proper cellular function by influencing transcript variants. Another important pathway involving SF3B3 is RNA transport where it assists in the export of mature and correctly processed mRNA from the nucleus to the cytoplasm.
Associated diseases and disorders	SF3B3 is closely linked to myelodysplastic syndromes and certain types of cancer such as breast cancer. Mutations or dysregulation of SF3B3 can result in aberrant splicing patterns contributing to tumorigenesis and disease progression. The protein is often studied along with SF3B1 as both are part of the splicing machinery and have been implicated in splicing-related genetic abnormalities that drive these disorders.

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

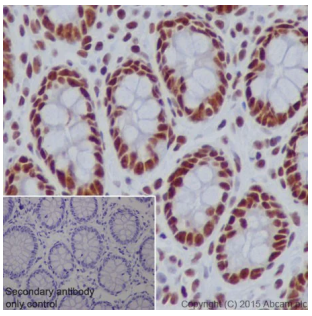
We do not recommend this combination. It is not covered by our product promise.

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.

12 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SF3B3 antibody [EPR18440] (ab209402)

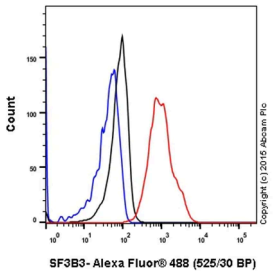
SF3B3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SF3B3 antibody

Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling SF3B3 with ab209402 at 1/4000 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.
Nucleus staining on Human colon is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

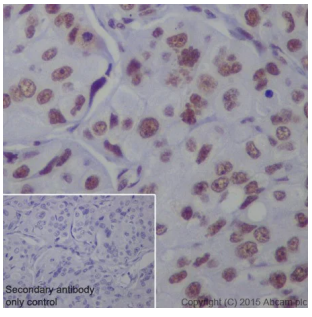
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-SF3B3 antibody [EPR18440] (ab209402)

SF3B3 Flow Cytometry (Intracellular) staining using rabbit Anti-SF3B3 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling SF3B3with ab209402 at 1/200 dilution (red) compared with a Rabbit IgG,monoclonal - Isotype control (ab172730) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti Rabbit IgG (Alexa Fluor® 488) at 1/500 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SF3B3 antibody [EPR18440] (ab209402)

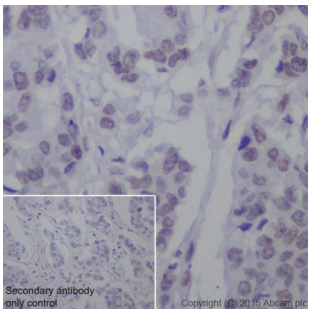
SF3B3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SF3B3 antibody

Immunohistochemical analysis of paraffin-embedded Human breast cancer (ER+) tissue labeling SF3B3 with ab209402 at 1/4000 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.
Nucleus staining on ER+ breast cancer is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SF3B3 antibody [EPR18440] (ab209402)

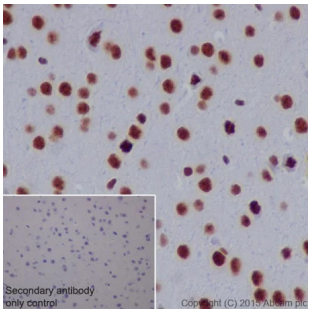
SF3B3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SF3B3 antibody

Immunohistochemical analysis of paraffin-embedded Human breast cancer (ER-) tissue labeling SF3B3 with ab209402 at 1/4000 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.
Weak nucleus staining on ER- breast cancer is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

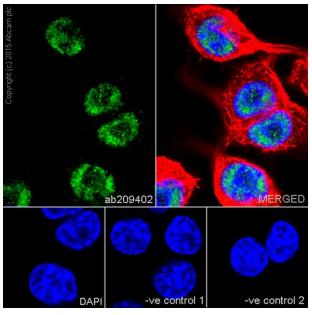


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SF3B3 antibody [EPR18440] (ab209402)

SF3B3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SF3B3 antibody

Immunohistochemical analysis of paraffin-embedded mouse cerebral cortex tissue labeling SF3B3 with ab209402 at 1/4000 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Nucleus staining on mouse cerebral cortex is observed. Counter stained with Hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-SF3B3 antibody [EPR18440] (ab209402)

SF3B3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SF3B3 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized RAW 264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) cells labeling SF3B3 with ab209402 at 1/500 dilution followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).
Confocal image showing nuclear staining on RAW 264.7 cell line.

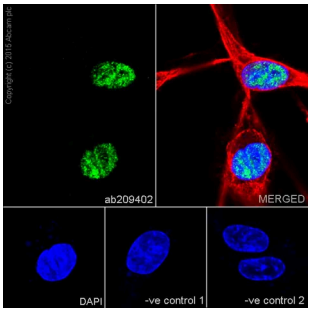
The nuclear counterstain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin antibody - Loading Control (ab7291) at 1/1000 dilution and Goat Anti-Mouse IgG (AlexaFluor®594) preadsorbed (ab150120) at 1/1000 dilution (red).

The negative controls are as follows:-

-ve control 1: ab209402 at 1/500 dilution followed by ab150120 at 1/1000 dilution.

-ve control 2: ab7291 at 1/1000 dilution followed by ab150077 at 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-SF3B3 antibody [EPR18440] (ab209402)

SF3B3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SF3B3 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized C6 (Rat glial tumor cell line) cells labeling SF3B3 with ab209402 at 1/500 dilution followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing nuclear staining on C6 cell line.

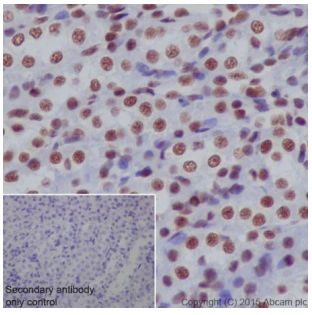
The nuclear counterstain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin antibody - Loading Control (ab7291) at 1/1000 dilution and Goat Anti-Mouse IgG (AlexaFluor®594) preadsorbed (ab150120) at 1/1000 dilution (red).

The negative controls are as follows:-

-ve control 1: ab209402 at 1/500 dilution followed by ab150120 at 1/1000 dilution.

-ve control 2: ab7291 at 1/1000 dilution followed by ab150077 at 1/1000 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SF3B3 antibody [EPR18440] (ab209402)

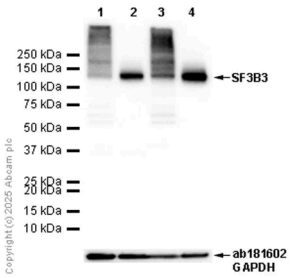
SF3B3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SF3B3 antibody

Immunohistochemical analysis of paraffin-embedded rat kidney tissue labeling SF3B3 with ab209402 at 1/4000 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.
Nucleus staining on rat kidney is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-SF3B3 antibody [EPR18440] (ab209402)

SF3B3 Western blot staining using rabbit Anti-SF3B3 antibody

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

We recommend not to boil the samples after lysis to get desired WB bands.

All lanes:
Western blot - Anti-SF3B3 antibody [EPR18440] (ab209402) at 1/10000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates boiled at 20 µg

Lane 2:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates unboiled at 20 µg

Lane 3:
Jurkat (Human T cell leukemia T lymphocyte) whole lysate boiled at 20 µg

Lane 4:
Jurkat (Human T cell leukemia T lymphocyte) whole lysate unboiled at 20 µg

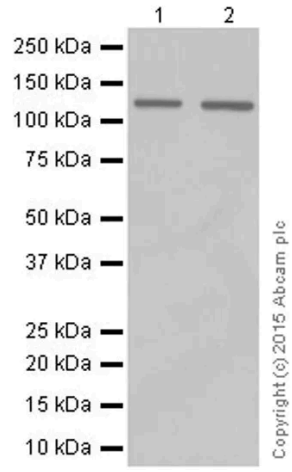
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/10000 dilution

Predicted band size: 136 kDa

Observed band size: 136 kDa

Exposure time: 5s



Western blot - Anti-SF3B3 antibody [EPR18440] (ab209402)

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-SF3B3 antibody [EPR18440] (ab209402) at 1/20000 dilution

Lane 1:
HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 20 µg

Lane 2:
Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate at 20 µg

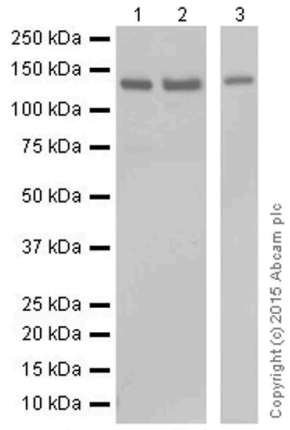
Secondary

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

Predicted band size: 136 kDa

Observed band size: 136 kDa

Exposure time: 8s



Western blot - Anti-SF3B3 antibody [EPR18440] (ab209402)

SF3B3 Western blot staining using rabbit Anti-SF3B3 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time : Lane 1/2: 4 seconds; Lane 3: 1 second.

All lanes:
Western blot - Anti-SF3B3 antibody [EPR18440] (ab209402) at 1/2000 dilution

Lane 1:
Human fetal liver lysate at 10 µg

Lane 2:
Human fetal heart lysate at 10 µg

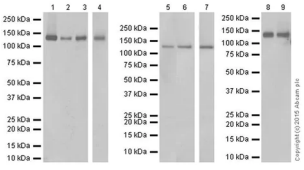
Lane 3:
Human fetal kidney lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 136 kDa

Observed band size: 136 kDa



Western blot - Anti-SF3B3 antibody [EPR18440] (ab209402)

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time : Lane 1/2/3: 4 seconds: Lane 4/5/6/8/9: 1 second; Lane 7: 8 seconds.

All lanes:
Western blot - Anti-SF3B3 antibody [EPR18440] (ab209402) at 1/2000 dilution

Lane 1:
Mouse brain lysate at 10 µg

Lane 2:
Mouse heart lysate at 10 µg

Lane 3:
Mouse kidney lysate at 10 µg

Lane 4:
Mouse spleen lysate at 10 µg

Lane 5:
Rat brain lysate at 10 µg

Lane 6:
Rat kidney lysate at 10 µg

Lane 7:
Rat heart lysate at 10 µg

Lane 8:
C6 (Rat glial tumor cell line) whole cell lysate at 10 µg

Lane 9:
RAW 264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

Secondary

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

Predicted band size: 136 kDa

Observed band size: 136 kDa

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