abcam

ab300479

Anti-SETD1B antibody [EPR25142-11]

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	EPR25142-11
Purification technique	Affinity purification Protein A
Concentration	0.52 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human, Rat, Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Species	Human
Dilution info	1/50
Notes	-

Expected

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

ICC/IF

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Species	Human
Dilution info	1/100
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

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

WB

Tested

Species	Rat
Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

Target data

See full target information SETD1B

Function	Histone methyltransferase that catalyzes methyl group transfer from S-adenosyl-L-methionine to the epsilon-amino group of 'Lys-4' of histone H3 (H3K4) via a non-processive mechanism (PubMed:17355966, PubMed:25561738). Part of chromatin remodeling machinery, forms H3K4me1, H3K4me2 and H3K4me3 methylation marks at active chromatin sites where transcription and DNA repair take place (PubMed:17355966, PubMed:25561738). Plays an essential role in regulating the transcriptional programming of multipotent hematopoietic progenitor cells and lymphoid lineage specification during hematopoiesis (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

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	SETD1B also known as KMT2G is a histone methyltransferase protein with a molecular mass of approximately 200 kDa. It functions mechanically by specifically methylating lysine 4 on histone H3 (H3K4) a critical action for chromatin modification. This methylation regulates gene transcription and the enzyme predominantly exerts its effects in the nucleus. SETD1B expresses across various tissues which suggests a broad regulatory role in different cellular environments.
Biological function summary	The role of SETD1B extends to functioning as part of the SET1/MLL complex which is responsible for the mono- di- and tri-methylation of histone H3 at lysine 4 (H3K4). The complex plays a significant role in transcriptional regulation influencing gene activation and silencing across different cellular processes. SETD1B's activity modulates the expression of genes involved in the regulation of development differentiation and cellular proliferation impacting numerous biological outcomes.
Pathways	The involvement of SETD1B in gene expression regulation positions it notably in the Wnt signaling pathway. This pathway is important for controlling cell fate and proliferation. Furthermore SETD1B interacts with other proteins like β-catenin enhancing transcription of Wnt target genes. Additionally SETD1B takes part in the regulation of pathways involving chromatin remodeling associating closely with proteins such as ASH2L which affects histone methylation states.
Associated diseases and disorders	Alterations in SETD1B are linked to intellectual disability and autism spectrum disorders. Disruptions in the protein's methylation function can lead to improper gene expression patterns emphasizing its association with neurodevelopmental conditions. SETD1B also connects with the CBP protein in certain cancer pathways where abnormal histone modification can drive oncogenesis. These interactions highlight SETD1B's significance in maintaining regular cellular function and its potential impact when mutant or dysregulated.

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

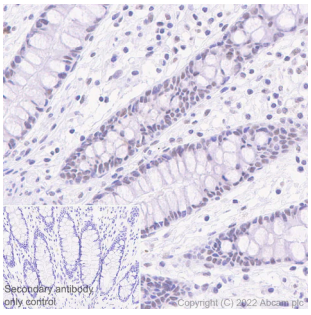
We do not recommend this combination. It is not covered by our product promise.

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.

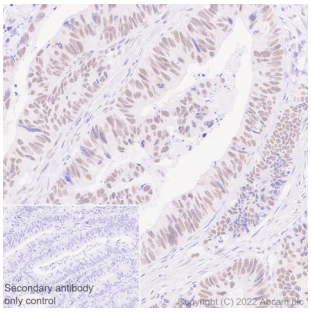
10 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SETD1B antibody [EPR25142-11] (ab300479)

SETD1B Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human colon using rabbit Anti-SETD1B antibody

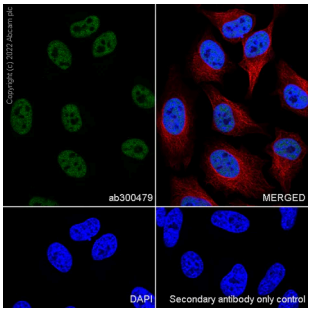
Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling SETD1B with ab300479 at 1/100 (5.2 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer). Nuclear staining on human colon at a low level (PMID: 24925220). The section was incubated with ab300479 at 4°C overnight. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer).Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SETD1B antibody [EPR25142-11] (ab300479)

SETD1B Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human colon cancer using rabbit Anti-SETD1B antibody

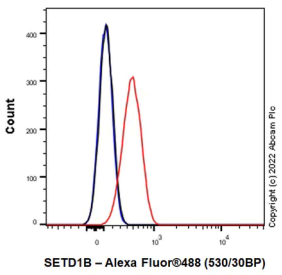
Immunohistochemical analysis of paraffin-embedded Human colon cancer tissue labeling SETD1B with ab300479 at 1/100 (5.2 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer). Nuclear staining on human colon cancer (PMID: 24925220). The section was incubated with ab300479 at 4°C overnight. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer).Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0)



Immunocytochemistry/ Immunofluorescence - Anti-SETD1B antibody [EPR25142-11] (ab300479)

SETD1B Immunocytochemistry/ Immunofluorescence staining of HeLa (human cervix adenocarcinoma epithelial cell) using rabbit Anti-SETD1B antibody

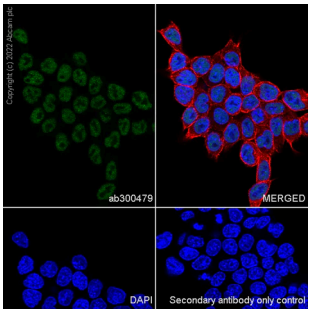
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HeLa (human cervix adenocarcinoma epithelial cell) cells labelling SETD1B with ab300479 at 1/100 (5.2 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing nuclear staining in HeLa cell line is observed. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/ml dilution.



Flow Cytometry (Intracellular) - Anti-SETD1B antibody [EPR25142-11] (ab300479)

SETD1B Flow Cytometry (Intracellular) staining of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (human cervix adenocarcinoma epithelial cell) cells using rabbit Anti-SETD1B antibody

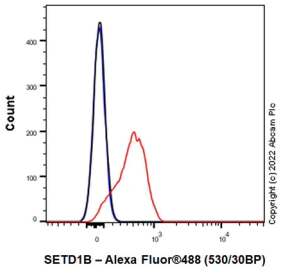
Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (human cervix adenocarcinoma epithelial cell) cells labelling SETD1B with ab300479 at 1/50 dilution (1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-SETD1B antibody [EPR25142-11] (ab300479)

SETD1B Immunocytochemistry/ Immunofluorescence staining of F9 (mouse embryonal carcinoma epithelial cell) using rabbit Anti-SETD1B antibody

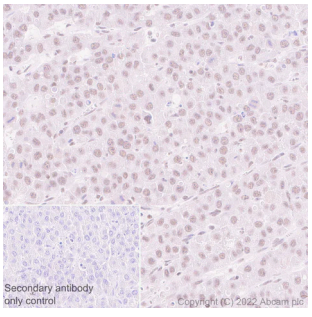
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized F9 (mouse embryonal carcinoma epithelial cell) cells labelling SETD1B with ab300479 at 1/100 (5.2 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing nuclear staining in F9 cell line is observed. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/ml dilution.



Flow Cytometry (Intracellular) - Anti-SETD1B antibody [EPR25142-11] (ab300479)

SETD1B Flow Cytometry (Intracellular) staining of 4% paraformaldehyde fixed 90% methanol permeabilized F9 (mouse embryonal carcinoma epithelial cell) cells using rabbit Anti-SETD1B antibody

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized F9 (mouse embryonal carcinoma epithelial cell) cells labelling SETD1B with ab300479 at 1/50 dilution (1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.

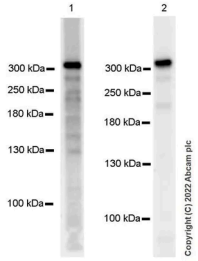


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SETD1B antibody [EPR25142-11] (ab300479)

SETD1B Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse liver cancer using rabbit Anti-SETD1B antibody

Immunohistochemical analysis of paraffin-embedded Mouse liver cancer tissue labeling SETD1B with ab300479 at 1/100 (5.2 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer). Nuclear staining on mouse liver cancer. The section was incubated with ab300479 at 4°C overnight. Counterstained with Hematoxylin. Secondary antibody only control: Secondary

antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer).Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0)



Western blot - Anti-SETD1B antibody [EPR25142-11] (ab300479)

SETD1B Western blot staining using rabbit Anti-SETD1B antibody

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

Exposure time: Lane1: 3 minutes, Lane 2: 26 seconds.

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 29138278).

Lysates were freshly made and used for Western blotting immediately to minimize protein degradation.

All lanes:
Western blot - Anti-SETD1B antibody [EPR25142-11] (ab300479) at 1/1000 dilution

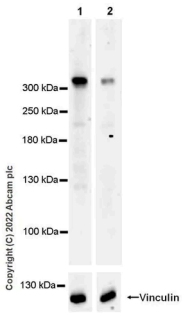
Lane 1:
MCF7 (human breast adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
F9 (mouse embryonal carcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

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

Predicted band size: 208 kDa



Western blot - Anti-SETD1B antibody [EPR25142-11] (ab300479)

SETD1B Western blot staining using rabbit Anti-SETD1B antibody

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

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 29138278).

Lysates were freshly made and used for Western blotting immediately to minimize protein degradation.

All lanes:
Western blot - Anti-SETD1B antibody [EPR25142-11] (ab300479) at 1/1000 dilution

Lane 1:
HeLa (human cervix adenocarcinoma epithelial cell) transfected with scrambled siRNA control, whole cell lysate at 20 µg

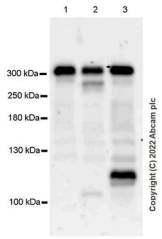
Lane 2:
HeLa transfected with siRNA specifically targeting SETD1B, whole cell lysate at 20 µg

Secondary

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

Predicted band size: 209 kDa

Exposure time: 3min



Western blot - Anti-SETD1B antibody [EPR25142-11] (ab300479)

SETD1B Western blot staining using rabbit Anti-SETD1B antibody

Exposure time: Lane 1 - 3 minutes, Lane 2: 26 seconds.

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 29138278).

Lysates were freshly made and used for Western blotting immediately to minimize protein degradation.

An unknown band at ~115 kDa was detected in lane 3.

All lanes:
Western blot - Anti-SETD1B antibody [EPR25142-11] (ab300479) at 1/1000 dilution

Lane 1:
293T (human embryonic kidney epithelial cell) whole cell lysate at 20 µg

Lane 2:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

Lane 3:
PC-12 (rat adrenal gland pheochromocytoma) whole cell lysate at 20 µg

Secondary

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

Predicted band size: 209 kDa

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