abcam

ab281834

Anti-L3MBTL1 antibody [EPR23810-121] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR23810-121
Purification technique	Affinity purification Protein A

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Mouse
Dilution info	-
Notes	-

IP

Tested

Species	Mouse, Human
Dilution info	-
Notes	-

Expected

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

WB

Tested

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information L3MBTL1

Function Polycomb group (PcG) protein that specifically recognizes and binds mono- and dimethyllysine residues on target proteins, thereby acting as a 'reader' of a network of post-translational modifications. PcG proteins maintain the transcriptionally repressive state of genes: acts as a chromatin compaction factor by recognizing and binding mono- and dimethylated histone H1b/H1-4 at 'Lys-26' (H1bK26me1 and H1bK26me2) and histone H4 at 'Lys-20' (H4K20me1 and H4K20me2), leading to condense chromatin and repress transcription. Recognizes and binds p53/TP53 monomethylated at 'Lys-382', leading to repress p53/TP53-target genes. Also recognizes and binds RB1/RB monomethylated at 'Lys-860'. Participates in the ETV6-mediated repression. Probably plays a role in cell proliferation. Overexpression induces multinucleated cells, suggesting that it is required to accomplish normal mitosis.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab281834 is the carrier-free version of ab259919.

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.

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	L3MBTL1 also known as the MBT domain-containing protein L3MBTL1 is a protein that plays a role in chromatin remodeling. This protein has a molecular mass of approximately 83 kDa. It is expressed in various tissues including hematopoietic progenitor cells and the brain. L3MBTL1 interacts with DNA and histones

	participating in the modification of chromatin structure important for gene expression regulation.
Biological function summary	L3MBTL1 functions as a transcriptional repressor involved in cell cycle regulation and differentiation. It acts by binding to methylated lysines on histone tails affecting chromatin compaction and accessibility. L3MBTL1 is part of the Polycomb group (PcG) protein complex which maintains genes in a repressed state ensuring proper cell fate determination.
Pathways	L3MBTL1 is an important component in chromatin modification and transcriptional repression pathways. It participates in pathways such as the Polycomb Repressive Complex 1 (PRC1)-mediated gene silencing pathway. L3MBTL1 interacts with other Polycomb proteins such as BMI1 and RING1 to ensure effective repression of target genes.
Associated diseases and disorders	L3MBTL1 has a strong connection to certain types of cancer and genetic syndromes. Alterations in L3MBTL1 expression or function can contribute to hematological malignancies like acute myeloid leukemia. It is also linked to developmental disorders due to its role in epigenetic regulation during development. L3MBTL1 may interact with proteins like EZH2 a related PcG protein influencing the progression of these diseases.

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

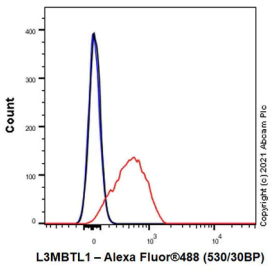
We do not recommend this combination. It is not covered by our product promise.

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.

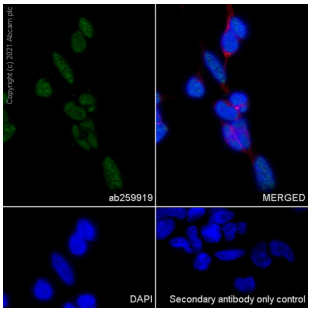
6 product images



Flow Cytometry (Intracellular) - Anti-L3MBTL1 antibody [EPR23810-121] - BSA and Azide free (ab281834)

L3MBTL1 Flow Cytometry (Intracellular) staining using rabbit Anti-L3MBTL1 antibody

This data was developed using ab259919, the same antibody clone in a different buffer formulation.
Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized IMR-32 (human neuroblastoma neuroblast) cells labelling L3MBTL1 with ab259919 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, ab150077) at 1/2000 dilution was used as the secondary antibody.

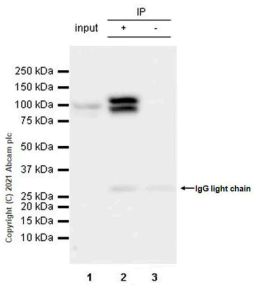


Immunocytochemistry/ Immunofluorescence - Anti-L3MBTL1 antibody [EPR23810-121] - BSA and Azide free (ab281834)

L3MBTL1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-L3MBTL1 antibody

This data was developed using ab259919, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized IMR-32 cells labelling L3MBTL1 with ab259919 at 1/50 (10.4 ug/ml) dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green) Confocal image showing nuclear staining in IMR-32 cells is observed. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



Immunoprecipitation - Anti-L3MBTL1 antibody [EPR23810-121] - BSA and Azide free (ab281834)

This data was developed using ab259919, the same antibody clone in a different buffer formulation.
L3MBTL1 was immunoprecipitated from 0.35 mg IMR-32 (human neuroblastoma neuroblast) whole cell lysate 10 ug with ab259919 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab259919 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: IMR-32 (human neuroblastoma neuroblast) whole cell lysate 10 ug

Lane 2: ab259919 IP in IMR-32 whole cell lysate

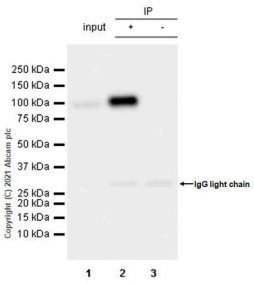
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab259919 in IMR-32 whole cell lysate

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

Exposure time: 5.5 seconds.
All lanes:
Immunoprecipitation - Anti-L3MBTL1 antibody [EPR23810-121] (ab259919)

Predicted band size: 83 kDa

Observed band size: 100 kDa



Immunoprecipitation - Anti-L3MBTL1 antibody [EPR23810-121] - BSA and Azide free (ab281834)

This data was developed using ab259919, the same antibody clone in a different buffer formulation.
L3MBTL1 was immunoprecipitated from 0.35 mg Neuro-2a (mouse neuroblastoma neuroblast) whole cell lysate 10 ug with ab259919 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab259919 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: Neuro-2a (mouse neuroblastoma neuroblast) whole cell lysate 10 ug

Lane 2: ab259919 IP in Neuro-2a whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab259919 in Neuro-2a whole cell lysate

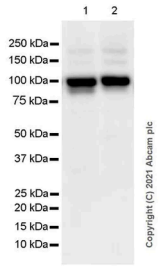
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 5.5 seconds.

All lanes:
Immunoprecipitation - Anti-L3MBTL1 antibody [EPR23810-121] (ab259919)

Predicted band size: 83 kDa

Observed band size: 100 kDa



Western blot - Anti-L3MBTL1 antibody [EPR23810-121] - BSA and Azide free (ab281834)

This data was developed using 259919, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST

Exposure time: 10 seconds.

All lanes:
Western blot - Anti-L3MBTL1 antibody [EPR23810-121] (ab259919) at 1/1000 dilution

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

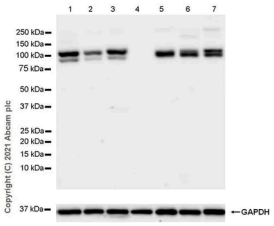
Lane 2:
HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

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

Predicted band size: 83 kDa

Observed band size: 100 kDa



Western blot - Anti-L3MBTL1 antibody [EPR23810-121] - BSA and Azide free (ab281834)

This data was developed using 259919, the same antibody clone in a different buffer formulation. Blocking and diluting buffer and concentration: 5% NFDM/TBST

Negative control: HL-60 (PMID: 10445843)

The two reactive bands represent different isoforms

Exposure time: 37 seconds.

All lanes:
Western blot - Anti-L3MBTL1 antibody [EPR23810-121] (ab259919) at 1/1000 dilution

Lane 1:
IMR-32 (human neuroblastoma neuroblast) whole cell lysate at 20 µg

Lane 2:
SH-SY5Y (human neuroblastoma epithelial cell) whole cell lysate at 20 µg

Lane 3:
SW480 (human colorectal adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 4:
HL-60 (human Acute Promyelocytic Leukemia promyeloblast) whole cell lysate at 20 µg

Lane 5:
Neuro-2a (mouse neuroblastoma neuroblast) whole cell lysate at 20 µg

Lane 6:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

Lane 7:
C6 (rat glial tumor glial cell) 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: 83 kDa

Observed band size: 100 kDa

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