abcam

ab314128

Anti-ASH2L antibody [EPR28054-48]

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	EPR28054-48
Purification technique	Affinity purification Protein A
Concentration	0.505 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Mouse

Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/1000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/1000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

ICC/IF

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Expected

Species	Human, Rat
Dilution info	Use at an assay dependent concentration.

Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Expected

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

IP

Tested

Species	Mouse
Dilution info	1/30
Notes	-

Expected

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

Target data

See full target information Ash2l

Function	Transcriptional regulator (By similarity). Component or associated component of some histone methyltransferase complexes which regulates transcription through recruitment of those complexes to gene promoters (By similarity). Component of the Set1/Ash2 histone methyltransferase (HMT) complex, a complex that

specifically methylates 'Lys-4' of histone H3, but not if the neighboring 'Lys-9' residue is already methylated (By similarity). As part of the MLL1/MLL complex it is involved in methylation and dimethylation at 'Lys-4' of histone H3 (By similarity). May play a role in hematopoiesis (By similarity). In association with RBBP5 and WDR5, stimulates the histone methyltransferase activities of KMT2A, KMT2B, KMT2C, KMT2D, SETD1A and SETD1B (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	ASH2L also known as ASH2 is a protein with a mass of approximately 75 kDa. It functions as part of the trithorax group (TrxG) complex specifically the COMPASS-like complex where it plays an important role in histone methylation. This methylation occurs at histone H3 on lysine 4 (H3K4) an important modification for

	transcriptional activation. ASH2L expresses in various tissues with significant levels in the nucleus due to its involvement in chromatin modification.
Biological function summary	ASH2L participates in the regulation of gene expression. It acts as a core subunit of the SET/MLL family of H3K4 methyltransferases which form part of larger COMPASS-like complexes. These complexes modulate chromatin structure influencing transcriptional activation by methylating histone H3 at lysine 4. This modification is essential for the transition from transcriptional repression to activation during development and cell differentiation. ASH2L's role in these processes highlights its importance in maintaining proper gene expression patterns.
Pathways	ASH2L participates in the Wnt signaling pathway and influences the cell cycle. In the Wnt pathway ASH2L interacts with proteins such as β-catenin to modulate the transcription of target genes. It also affects the methylation status of promoters in various signaling pathways contributing to the regulation of gene expression involved in cell proliferation and differentiation. Additionally ASH2L is functionally connected to other proteins like MLL1 which shares involvement in chromatin remodeling and is important for epigenetic regulation.
Associated diseases and disorders	ASH2L association with cancer and neurodevelopmental disorders is significant. Changes in ASH2L expression or function can lead to dysregulation of gene expression promoting oncogenesis or developmental abnormalities. In some cancers ASH2L's interaction with MLL can result in altered histone marks affecting tumor suppressor or oncogene expression. Besides cancer neurodevelopmental disorders like intellectual disability may have links to ASH2L due to its role in regulating genes involved in brain development. Understanding ASH2L's interactions and dysfunctions in these contexts provides insight into potential therapeutic approaches.

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

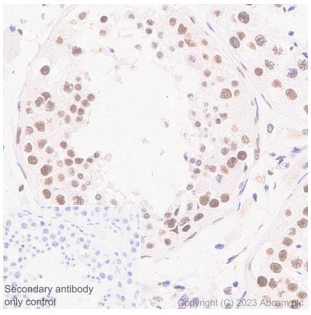
We do not recommend this combination. It is not covered by our product promise.

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



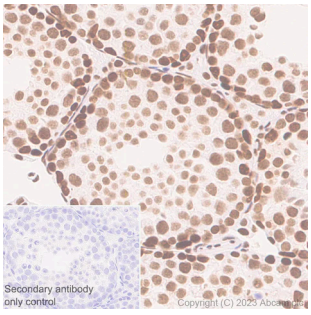
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ASH2L antibody [EPR28054-48] (ab314128)

Immunohistochemical analysis of paraffin-embedded Human testis tissue labeling ASH2L with ab314128 at 1/500 (1.01 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on human testis. The section was incubated with ab314128 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



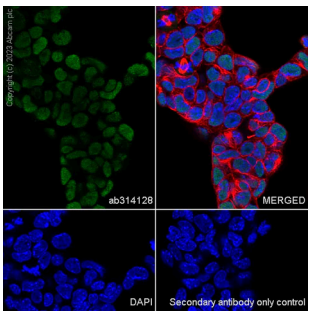
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Positive staining on mouse testis. The section was incubated with ab314128 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

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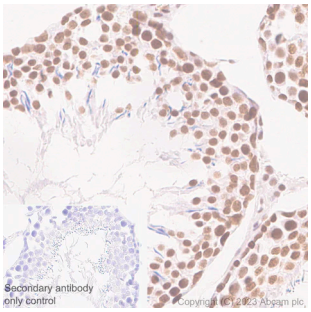
Immunocytochemistry/ Immunofluorescence - Anti-ASH2L antibody [EPR28054-48] (ab314128)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized ES-D3 [D3] (mouse blastocyst-derived embryonic stem cell) cells labelling ASH2L with ab314128 at 1/50 (10.1 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 ES-D3 [D3] cell line. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

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.



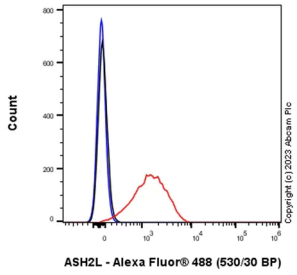
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ASH2L antibody [EPR28054-48] (ab314128)

Immunohistochemical analysis of paraffin-embedded Rat testis tissue labeling ASH2L with ab314128 at 1/1000 (0.505 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on rat testis. The section was incubated with ab314128 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

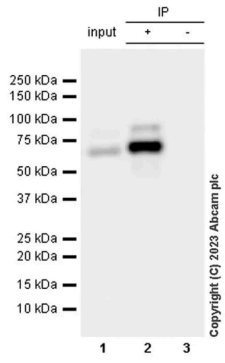
Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-ASH2L antibody [EPR28054-48] (ab314128)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized ES-D3 (mouse blastocyst-derived embryonic stem cell) cells labelling ASH2L with ab314128 at 1/500 dilution (0.1 ug)/Red (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).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-ASH2L antibody [EPR28054-48] (ab314128)

ASH2L was immunoprecipitated from 0.35 mg ES-D3 (mouse embryonic pluripotent stem Cell) whole cell lysate with ab314128 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab314128 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

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

Lysate was freshly made and used for Western blotting immediately to minimize protein degradation.

All lanes:
Immunoprecipitation - Anti-ASH2L antibody [EPR28054-48] (ab314128) at 1/1000 dilution

Lane 1:
ES-D3 (mouse embryonic pluripotent stem Cell) whole cell lysate

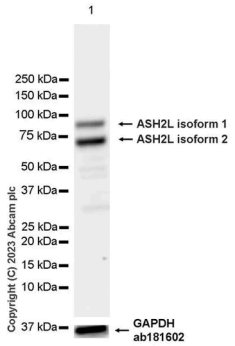
Lane 2:
ab314128 IP in ES-D3 (mouse embryonic pluripotent stem Cell) whole cell lysate

Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab314128 in ES-D3 whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 3s



Western blot - Anti-ASH2L antibody [EPR28054-48] (ab314128)

ASH2L Western blot staining of K562 (human chronic myelogenous leukemia lymphoblast) whole cell lysate using rabbit Anti-ASH2L antibody

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 15199122).

Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

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

All lanes:
Western blot - Anti-ASH2L antibody [EPR28054-48] (ab314128) at 1/1000 dilution

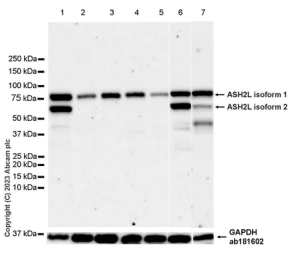
All lanes:
K562 (human chronic myelogenous leukemia lymphoblast) whole cell lysate at 20 µg

Secondary

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

Observed band size: 65 kDa, 80 kDa, 36 kDa

Exposure time: 10s



Western blot - Anti-ASH2L antibody [EPR28054-48] (ab314128)

ASH2L Western blot staining using rabbit Anti-ASH2L antibody

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 15199122).

Lanes 1-6 are applied with Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 and lane 7 is applied with Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

Exposure time: Lanes 1-6: 180 seconds, lane 7: 37 seconds

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
All lanes:
Western blot - Anti-ASH2L antibody [EPR28054-48] (ab314128) at 1/1000 dilution

Lane 1:
Mouse testis tissue lysate at 20 µg

Lane 2:
Mouse heart tissue lysate at 20 µg

Lane 3:
Mouse lung tissue lysate at 20 µg

Lane 4:
Mouse liver tissue lysate at 20 µg

Lane 5:
Rat heart tissue lysate at 20 µg

Lane 6:
Rat testis tissue lysate at 20 µg

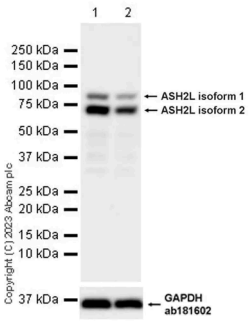
Lane 7:
Human testis tissue lysate at 20 µg

Secondary

Lanes 1 - 6:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Lane 7:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Observed band size: 65 kDa, 80 kDa, 36 kDa



Western blot - Anti-ASH2L antibody [EPR28054-48] (ab314128)

ASH2L Western blot staining using rabbit Anti-ASH2L antibody

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

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

All lanes:
Western blot - Anti-ASH2L antibody [EPR28054-48] (ab314128) at 1/1000 dilution

Lane 1:
F9 (mouse embryonal carcinoma epithelial cell) transfected with scrambled siRNA control whole cell lysate at 20 µg

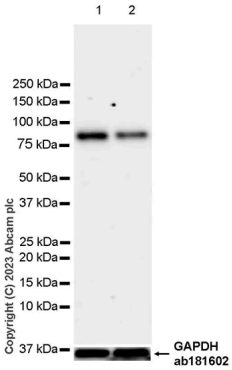
Lane 2:
F9 transfected with siRNA specifically targeting ASH2L whole cell lysate at 20 µg

Secondary

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

Observed band size: 65 kDa, 80 kDa, 36 kDa

Exposure time: 26s



Western blot - Anti-ASH2L antibody [EPR28054-48] (ab314128)

ASH2L Western blot staining using rabbit Anti-ASH2L antibody

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

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

All lanes:
Western blot - Anti-ASH2L antibody [EPR28054-48] (ab314128) at 1/1000 dilution

Lane 1:
NIH/3T3 (mouse embryonic fibroblast) transfected with scrambled siRNA control whole cell lysate at 20 µg

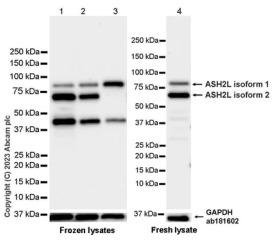
Lane 2:
NIH/3T3 transfected with siRNA specifically targeting ASH2L whole cell lysate at 20 µg

Secondary

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

Observed band size: 80 kDa, 36 kDa

Exposure time: 37s



Western blot - Anti-ASH2L antibody [EPR28054-48] (ab314128)

ASH2L Western blot staining using rabbit Anti-ASH2L antibody

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 15199122).

In lanes 1-3, the lysates were stored at -80☒ prior to Western Blotting. The bands beneath the target band (40 kDa) are likely to be degradation products. In lane 4, the lysate was freshly made and used for Western Blotting immediately to minimize protein degradation.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

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

All lanes:
Western blot - Anti-ASH2L antibody [EPR28054-48] (ab314128) at 1/1000 dilution

Lanes 1 and 4:
ES-D3 (mouse embryonic pluripotent stem Cell) whole cell lysate at 20 µg

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

Lane 3:
MEF (mouse embryonic fibroblast (immortalized)) whole cell lysate at 20 µg

Secondary

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

Observed band size: 65 kDa, 80 kDa, 36 kDa

Exposure time: 37s

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