abcam

ab240191

Anti-ASH2L antibody [EPR13107(B)] - BSA and Azide free

Recombinant | RabMAb | Advanced Validation

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	EPR13107(B)
Purification technique	Affinity purification Protein A
Concentration	1.004 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Mouse
Dilution info	-

Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Expected

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

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

ChIC/CUT&RUN-seq

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information ASH2L

Function	Transcriptional regulator (PubMed:12670868). Component or associated component of some histone methyltransferase complexes which regulates transcription through recruitment of those complexes to gene promoters (PubMed:19131338). 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 (PubMed:19556245). As part of the MLL1/MLL complex it is involved in methylation and dimethylation at 'Lys-4' of histone H3 (PubMed:19556245). May play a role in hematopoiesis (PubMed:12670868). In association with RBBP5 and WDR5, stimulates the histone methyltransferase activities of KMT2A, KMT2B, KMT2C, KMT2D, SETD1A and SETD1B (PubMed:21220120, PubMed:22266653).

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

ab240191 is the carrier-free version of ab176334.

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	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

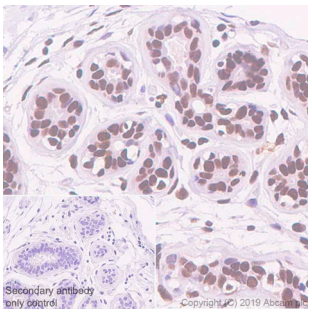
We do not recommend this combination. It is not covered by our product promise.

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.

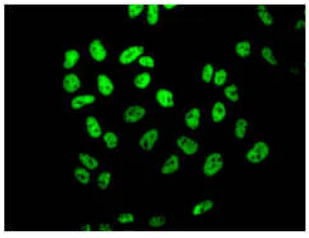
11 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ASH2L antibody [EPR13107(B)] - BSA and Azide free (ab240191)

ASH2L Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ASH2L antibody

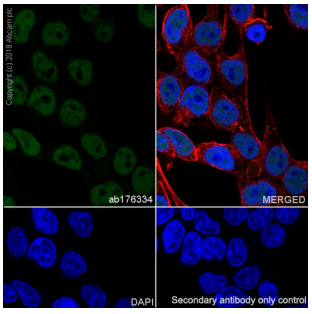
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human breast tissue sections labeling ASH2L with purified ab176334 at 1/8000 dilution (0.05 µg/ml). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 1 (pH 6.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab176334).



Immunocytochemistry/ Immunofluorescence - Anti-ASH2L antibody [EPR13107(B)] - BSA and Azide free (ab240191)

ASH2L Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ASH2L antibody

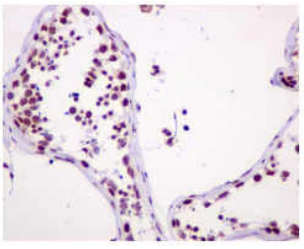
Immunofluorescent analysis of HeLa labeling ASH2Lwith ab176334 at 1/100 dilution.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab176334).



Immunocytochemistry/ Immunofluorescence - Anti-ASH2L antibody [EPR13107(B)] - BSA and Azide free (ab240191)

ASH2L Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ASH2L antibody

Immunocytochemistry/ Immunofluorescence analysis of 293T (Human embryonic kidney epithelial cell) cells labeling ASH2L with purified ab176334 at 1/50 dilution (7.78 µg/ml). 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 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/ml) dilution. DAPI (blue) was used as 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 (ab176334).

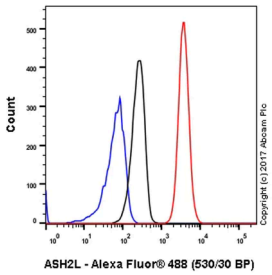


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ASH2L antibody [EPR13107(B)] - BSA and Azide free (ab240191)

ASH2L Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ASH2L antibody

Immunohistochemical analysis of paraffin-embedded Human testis tissue labeing ASH2L with ab176334 at 1/50 dilution.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

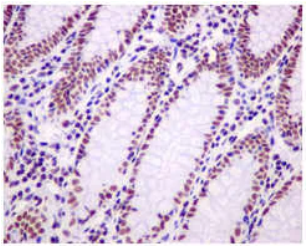
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab176334).



Flow Cytometry (Intracellular) - Anti-ASH2L antibody [EPR13107(B)] - BSA and Azide free (ab240191)

ASH2L Flow Cytometry (Intracellular) staining using rabbit Anti-ASH2L antibody

Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling ASH2L (red) with ab176334 at a 1/1200 dilution. Cells were fixed with 80% methanol and permeabilized with 0.1% Tween-20. A goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) was used as the secondary antibody at a 1/2000 dilution. Black - Rabbit monoclonal IgG (ab172730). Blue (unlabeled control) - Cells without incubation with the primary and secondary antibodies.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab176334).

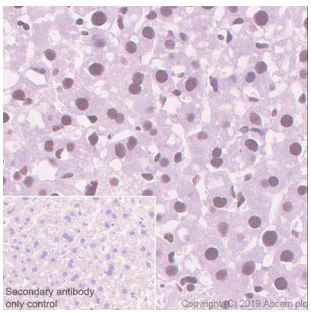


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ASH2L antibody [EPR13107(B)] - BSA and Azide free (ab240191)

ASH2L Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ASH2L antibody

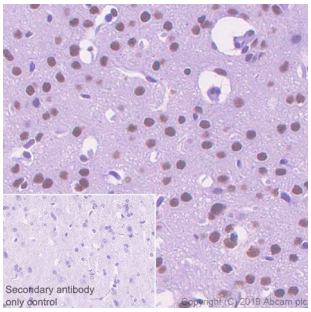
Immunohistochemical analysis of paraffin-embedded Human colon tissue labeing ASH2L with ab176334 at 1/50 dilution.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab176334).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ASH2L antibody [EPR13107(B)] - BSA and Azide free (ab240191)

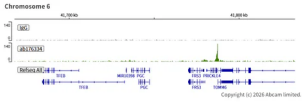
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse liver tissue sections labeling ASH2L with purified ab176334 at 1/8000 dilution (0.05 µg/ml). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 1 (pH 6.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
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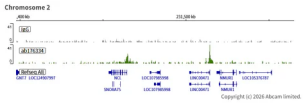
ASH2L Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ASH2L antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat cerebrum tissue sections labeling ASH2L with purified ab176334 at 1/8000 dilution (0.05 µg/ml). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 1 (pH 6.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
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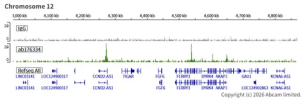
ChIC/CUT&RUN sequencing - Anti-ASH2L antibody [EPR13107(B)] - BSA and Azide free (ab240191)

This data was developed using ab176334, the same antibody clone in a different buffer formulation.
ChIC/CUT&RUN was performed using a pAG-MNase at a final concentration of 700 ng/mL, 2.5 x 10^5 K-562 (human chronic myelogenous leukemia lymphoblast) cells and 5 µg of ab176334 [EPR13107(B)]. The resulting DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 10 million reads. The negative IgG control ab172730 is also shown. The University of Geneva owns patents relevant to ChIC (Chromatin Immuno-Cleavage) methods.



ChIC/CUT&RUN sequencing - Anti-ASH2L antibody [EPR13107(B)] - BSA and Azide free (ab240191)

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