abcam

ab259972

Anti-SmarcAL1 antibody [EPR23912-44]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	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	EPR23912-44
Purification technique	Affinity purification Protein A
Concentration	0.46 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ChIP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-

Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/50
Notes	Use at 1/500 for NIH/3T3.

Species	Human
Dilution info	1/50
Notes	Use at 1/500 for NIH/3T3.

Expected

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

Target data

See full target information SMARCAL1

Function	ATP-dependent annealing helicase that binds selectively to fork DNA relative to ssDNA or dsDNA and catalyzes the rewinding of the stably unwound DNA. Rewinds single-stranded DNA bubbles that are stably bound by replication protein A (RPA). Acts throughout the genome to reanneal stably unwound DNA, performing the opposite reaction of many enzymes, such as helicases and polymerases, that unwind DNA. May play an important role in DNA damage response by acting at stalled replication forks.

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	SmarcAL1 also known as SWI/SNF-related ATPase family member A1 is a DNA-dependent ATPase that unwinds DNA during replication and repair. It also plays a role in chromatin remodeling. The molecular mass of SmarcAL1 is approximately 105 kDa. SmarcAL1 expression is particularly noticeable in tissues with high replicative demands like testis and ovary among others.
Biological function summary	SmarcAL1 facilitates proper replication fork stability and functioning by associating with other proteins and complexes. It is a part of the SWI/SNF chromatin remodeling complex which alters the structure of chromatin to regulate access to DNA. This protein works with other chromatin remodeling factors to ensure the DNA replication and repair processes run smoothly.
Pathways	SmarcAL1 is a significant player in DNA damage response and repair pathways. It is actively involved in the homologous recombination repair pathway. Associated proteins within this pathway include BRCA1 and RAD51 which are essential for repairing double-strand breaks in DNA. Together these proteins promote genomic stability by correcting DNA damage and supporting normal cell cycle progression.
Associated diseases and disorders	Mutations or dysfunctions in SmarcAL1 have connections to Schimke immuno-osseous dysplasia (SIOD) and various cancer types. These associations arise because SmarcAL1 influences genome stability and cell cycle progression. The

connection of SmarcAL1 with BRCA1 highlights its relevance in breast cancer where malfunction in DNA repair mechanisms contribute to cancer development.

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

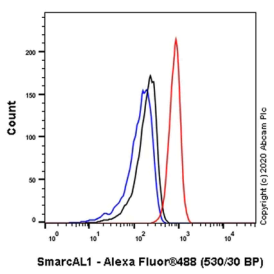
We do not recommend this combination. It is not covered by our product promise.

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.

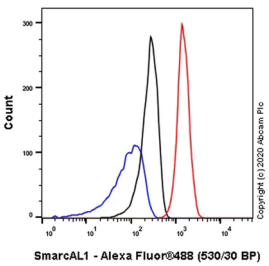
4 product images



Flow Cytometry (Intracellular) - Anti-SmarcAL1 antibody [EPR23912-44] (ab259972)

SmarcAL1 Flow Cytometry (Intracellular) staining using rabbit Anti-SmarcAL1 antibody

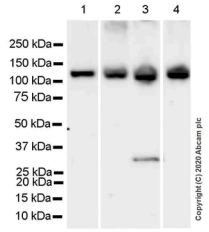
Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HeLa (human cervix adenocarcinoma epithelial cell) cells labelling SmarcAL1 with ab259972 at 1/50 dilution (1µg) (Red) compared with a Rabbit monoclonal IgG (ab172730) isotype control (Black) and an unlabelled 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.



Flow Cytometry (Intracellular) - Anti-SmarcAL1 antibody [EPR23912-44] (ab259972)

SmarcAL1 Flow Cytometry (Intracellular) staining using rabbit Anti-SmarcAL1 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized NIH/3T3 (mouse embryonic fibroblast) cells labelling SmarcAL1 with ab259972 at 1/500 dilution (0.1µg) (Red) compared with a Rabbit monoclonal IgG (ab172730) isotype control (Black) 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.



Western blot - Anti-SmarcAL1 antibody [EPR23912-44] (ab259972)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
Lysates were made freshly and used in WB test immediately to minimize protein degradation.

Exposure times: Lane 1: 92 seconds; Lanes 2-3: 48 seconds; Lane 4: 26 seconds.

All lanes:
Western blot - Anti-SmarcAL1 antibody [EPR23912-44] (ab259972) at 1/1000 dilution

Lane 1:
HeLa (human cervix adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Lane 2:
HEK-293T (human embryonic kidney epithelial cell), whole cell lysate at 20 µg

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

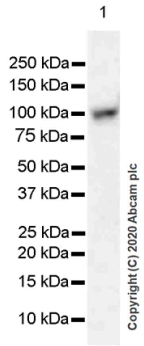
Lane 4:
PC-12 (rat adrenal gland pheochromocytoma), whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/20000 dilution

Predicted band size: 106 kDa

Observed band size: 105 kDa



Western blot - Anti-SmarcAL1 antibody [EPR23912-44] (ab259972)

SmarcAL1 Western blot staining of C6 (rat glial tumor glial cell), whole cell lysate using rabbit Anti-SmarcAL1 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
Exposure time: 3 minutes.

All lanes:
Western blot - Anti-SmarcAL1 antibody [EPR23912-44] (ab259972) at 1/1000 dilution

All lanes:
C6 (rat glial tumor glial cell), whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/20000 dilution

Predicted band size: 106 kDa

Observed band size: 105 kDa

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