abcam

ab300041

Anti-SMARCA6 antibody [EPR25295-62] (BSA and Azide free)

Recombinant | RabMAb

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	EPR25295-62
Purification technique	Affinity purification Protein A
Concentration	1.038 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	-

Notes	-

Expected

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

Not recommended

Species	Human
Dilution info	-
Notes	-

IP

Tested

Species	Mouse, Human
Dilution info	-
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

Expected

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

IHC-P

Tested

Species	Rat, Mouse, Human
Dilution info	-
Notes	-

WB

Tested

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information HELLS

Function

ATP-dependent chromatin remodeler that regulates chromatin accessibility, DNA methylation, and histone modifications. It facilitates de novo DNA methylation at repetitive sequences and promotes transcriptional silencing via recruitment of DNA methyltransferases (DNMTs) and histone deacetylases (HDACs), contributing to heterochromatin formation and repression of transposable elements (PubMed:30307408). Also involved in DNA repair by recruiting DNA damage response mediators to double-strand breaks in heterochromatin, promoting homologous recombination via RBBP8/CtIP-dependent end resection (PubMed:22946062, PubMed:31802118). During meiosis, it is recruited by PRDM9 to recombination hotspots, aiding chromatin opening (PubMed:32001511). Through these diverse roles, is crucial for processes such as development, differentiation, and genomic stability (PubMed:22946062, PubMed:31802118). Involved in regulation of the expansion or survival of lymphoid cells (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Aliquoting information	Upon delivery aliquot

Notes

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.

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.

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.

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	SMARCA6 also known as SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily A member 6 is a protein with a molecular weight of approximately 170 kDa. It functions as an ATPase and is an important component of chromatin remodeling complexes. SMARCA6 plays a role in modifying chromatin structure through ATP hydrolysis which influences gene expression. This protein is expressed in various tissues and its expression can be detected across different cell types including those involved in blood functions.

Biological function summary	SMARCA6 influences gene expression by modifying the chromatin structure which allows transcription factors to access DNA. It is a part of the SWI/SNF chromatin remodeling complex critical for regulating a wide range of genes involved in development and cell cycle. Through the remodeling of chromatin SMARCA6 controls access to specific genomic regions and modulates transcriptional activation or repression therefore influencing cellular differentiation and proliferation.
Pathways	SMARCA6 participates in pathways involved in chromatin organization and gene regulation. It engages in the Wnt signaling pathway interacting with proteins such as BAF155 and BAF170 to modulate transcriptional outcomes. SMARCA6's activity in these pathways is essential for cellular processes impacting how cells respond to growth signals and maintain homeostasis.
Associated diseases and disorders	Aberrations in SMARCA6 function or expression can lead to complications such as cancer and neurodevelopmental disorders. It has been linked to leukemia where chromatin remodeling anomalies disrupt normal gene expression patterns. In such contexts SMARCA6 interacts with proteins like BAF57 affecting the regulation of oncogenes and tumor suppressors. Altered SMARCA6 activity in these diseases highlights its role in maintaining genomic stability and proper cell function.

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

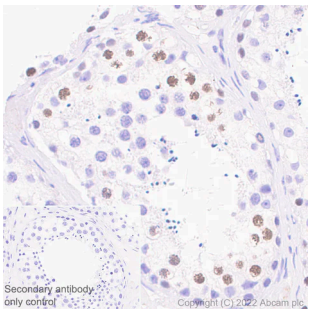
We do not recommend this combination. It is not covered by our product promise.

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.

9 product images



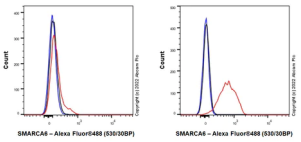
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SMARCA6 antibody [EPR25295-62] (BSA and Azide free) (ab300041)

SMARCA6 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SMARCA6 antibody

This data was developed using ab300040, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human testis tissue labelling SMARCA6 with ab300040 at 1/500 (1.06 µg/ml) followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection). Positive staining on human testis (PMID: 21349825). The section was incubated with ab300040 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).

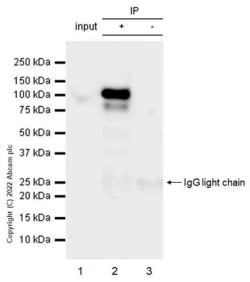
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-SMARCA6 antibody [EPR25295-62] (BSA and Azide free) (ab300041)

SMARCA6 Flow Cytometry (Intracellular) staining using rabbit Anti-SMARCA6 antibody

This data was developed using ab300040, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized LNCaP (Human prostate carcinoma epithelial cell, Left) / MOLT-4 (human lymphoblastic leukemia T lymphoblast, Right) cells labeling SMARCA6 with ab300040 at 1/500 dilution (0.1 µg) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabeled 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. Low expression: LNCaP(PMID:10910076).



Immunoprecipitation - Anti-SMARCA6 antibody [EPR25295-62] (BSA and Azide free) (ab300041)

This data was developed using ab300040, the same antibody clone in a different buffer formulation.
SMARCA6 was immunoprecipitated from 0.35 mg Raji (human Burkitt's lymphoma b lymphocyte) whole cell lysate 10 µg with ab300040 at 1/30 dilution (2 µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab300040 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP) (ab131366) was used at 1/5000 dilution.

Lane 1: Raji (human Burkitt's lymphoma b lymphocyte) whole cell lysate 10 µg

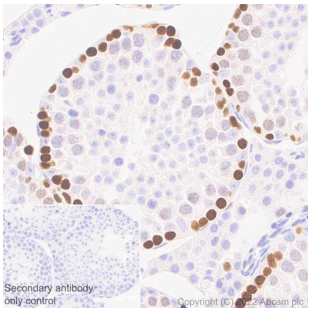
Lane 2: ab300040 in Raji whole cell lysate

Lane 3:Rabbit monoclonal IgG (ab172730) instead of ab300040 in Raji whole cell lysate

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

Exposure time: 15 seconds
All lanes:
Immunoprecipitation - Anti-SMARCA6 antibody [EPR25295-62] (ab300040)

Predicted band size: 97 kDa



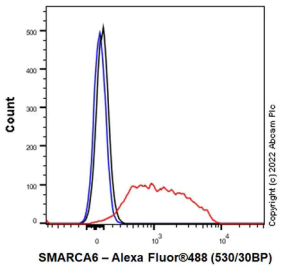
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SMARCA6 antibody [EPR25295-62] (BSA and Azide free) (ab300041)

SMARCA6 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SMARCA6 antibody

This data was developed using ab300040, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Mouse testis tissue labeling SMARCA6 with ab300040 at 1/500 (1.06 µg/ml) followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection). Positive staining on mouse testis (PMID: 21349825). The section was incubated with ab300040 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).

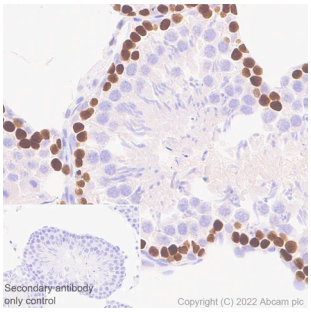
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-SMARCA6 antibody [EPR25295-62] (BSA and Azide free) (ab300041)

SMARCA6 Flow Cytometry (Intracellular) staining using rabbit Anti-SMARCA6 antibody

This data was developed using ab300040, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized NIH/3T3 (Mouse embryonic fibroblast) cells labelling SMARCA6 with ab300040 at 1/50 dilution (1µg) (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.



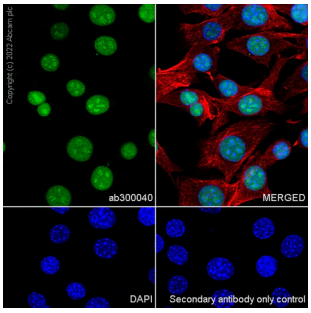
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SMARCA6 antibody [EPR25295-62] (BSA and Azide free) (ab300041)

SMARCA6 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SMARCA6 antibody

This data was developed using ab300040, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Rat testis tissue labelling SMARCA6 with ab300040 at 1/500 dilution (1.06 µg/ml) followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection). Positive staining on rat testis (PMID: 21349825). The section was incubated with ab300040 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 with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

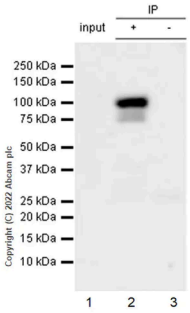


Immunocytochemistry/ Immunofluorescence - Anti-SMARCA6 antibody [EPR25295-62] (BSA and Azide free) (ab300041)

SMARCA6 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SMARCA6 antibody

This data was developed using ab300040, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeilized NIH/3T3 (mouse embryonic fibroblast) cells labelling SMARCA6 with ab300040 at 1/50 dilution (10.6 µg/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (2 µg/mL) (Green). Confocal image showing nuclear staining in NIH/3T3 cell line. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5µg/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 µg/mL) dilution.



Immunoprecipitation - Anti-SMARCA6 antibody [EPR25295-62] (BSA and Azide free) (ab300041)

This data was developed using ab300040, the same antibody clone in a different buffer formulation.
SMARCA6 was immunoprecipitated from 0.35 mg NIH/3T3 (mouse embryonic fibroblast) whole cell lysate 10 µg with ab300040 at 1/30 dilution (2 µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab300040 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP) (ab131366) was used at 1/5000 dilution.

Lane 1: NIH/3T3 (mouse embryonic fibroblast) whole cell lysate 10 µg

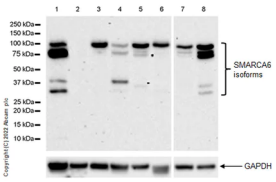
Lane 2: ab300040 in NIH/3T3 whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab300040 in NIH/3T3 whole cell lysate

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

Exposure time: 32 seconds
All lanes:
Immunoprecipitation - Anti-SMARCA6 antibody [EPR25295-62] (ab300040)

Predicted band size: 97 kDa



Western blot - Anti-SMARCA6 antibody [EPR25295-62] (BSA and Azide free) (ab300041)

SMARCA6 Western blot staining using rabbit Anti-SMARCA6 antibody

This data was developed using ab300040, the same antibody clone in a different buffer formulation.
Blocking / Diluting buffer and concentration:

5% NFDM/TBST

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID:10910076).
Low expression cell line: LNCaP, RPMI-8226(PMID:10910076).

All lanes:
Western blot - Anti-SMARCA6 antibody [EPR25295-62] (ab300040) at 1/1000 dilution

Lane 1:
MOLT-4 (human lymphoblastic leukemia t lymphoblast) whole cell lysate at 20 µg

Lane 2:
LNCaP (human prostate carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 3:
Raji (human burkitt's lymphoma b lymphocyte) whole cell lysate at 20 µg

Lane 4:
RPMI-8226 (human plasmacytoma, myeloma b lymphocyte) whole cell lysate at 20 µg

Lane 5:
Mouse thymus tissue lysate at 20 µg

Lane 6:
Rat thymus tissue lysate at 20 µg

Lane 7:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

Lane 8:
RAW 264.7 (mouse abelson murine leukemia virus-induced tumor macrophage) 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: 97 kDa

Observed band size: 32-100 kDa

Exposure time: 3min

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