abcam

Product datasheet

Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade ab172638

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade
Description	Rabbit monoclonal [EPR12395] to SMARCC1/BAF155 - ChIP Grade
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), ChIP, WB, ICC/IF, IP
Species reactivity	**Reacts with:** Rat, Human
Immunogen	Synthetic peptide within Human SMARCC1/BAF155 aa 700-800 (Cysteine residue). The exact sequence is proprietary. Database link: **Q92922**
Positive control	HeLa, K562, Jurkat and 293T cell lysates. Permeabilized Jurkat cells. Immunoprecipitation pellet from Jurkat whole cell lysate (**ab7899**). Rat testis lysates.
General notes	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. Mouse: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide

	Constituents: 40% Glycerol (glycerin, glycerine), 59% PBS, 0.21% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR12395
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab172638 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/10 - 1/100. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
ChIP		Use at an assay dependent concentration.
WB	★★★★★ (1)	1/1000 - 1/10000. Predicted molecular weight: 123 kDa.
ICC/IF	★★★★★ (1)	1/100. **For unpurified use at 1/250 - 1/500.**
IP		1/10 - 1/100.

Target

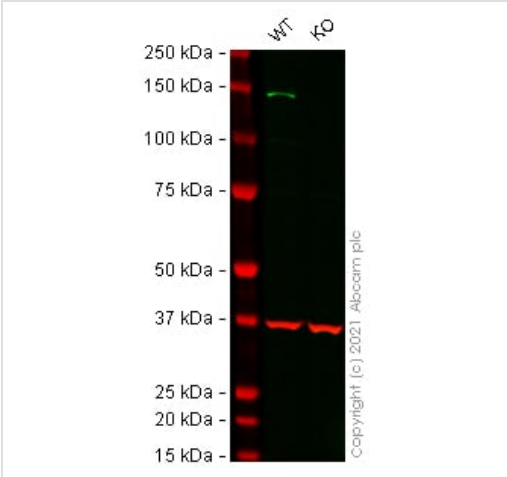
Function Involved in transcriptional activation and repression of select genes by chromatin remodeling (alteration of DNA-nucleosome topology). May stimulate the ATPase activity of the catalytic subunit of the complex. Also involved in vitamin D-coupled transcription regulation via its association with the WINAC complex, a chromatin-remodeling complex recruited by vitamin D receptor (VDR), which is required for the ligand-bound VDR-mediated transrepression of the CYP27B1 gene. Belongs to the neural progenitors-specific chromatin remodeling complex (npBAF complex) and the neuron-specific chromatin remodeling complex (nBAF complex). During neural development a switch from a stem/progenitor to a post-mitotic chromatin remodeling mechanism occurs as neurons exit the cell cycle and become committed to their adult state. The transition from proliferating neural stem/progenitor cells to post-mitotic neurons requires a switch in subunit composition of the npBAF and nBAF complexes. As neural progenitors exit mitosis and differentiate into neurons, npBAF complexes which contain ACTL6A/BAF53A and PHF10/BAF45A, are exchanged for homologous alternative ACTL6B/BAF53B and DPF1/BAF45B or DPF3/BAF45C subunits in neuron-specific complexes (nBAF). The npBAF complex is essential for the self-renewal/proliferative capacity of the multipotent neural stem cells. The nBAF complex along with CREST plays a role regulating the activity of genes essential for dendrite growth.

Tissue specificity Expressed in brain, heart, muscle, placenta, lung, liver, muscle, kidney and pancreas.

Sequence similarities Belongs to the SMARCC family.
Contains 1 SANT domain.

	Contains 1 SWIRM domain.
Post-translational modifications	Phosphorylated on undefined residues at the G2/M transition by ERK1 and other kinases. This may contribute to cell cycle specific inactivation of remodeling complexes containing the phosphorylated protein.
Cellular localization	Nucleus.

Images



Western blot - Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade (ab172638)

All lanes : Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade (ab172638) at 1/1000 dilution

Lane 1 : Wild-type HeLa cell lysate
Lane 2 : SMARCC1 knockout HeLa cell lysate

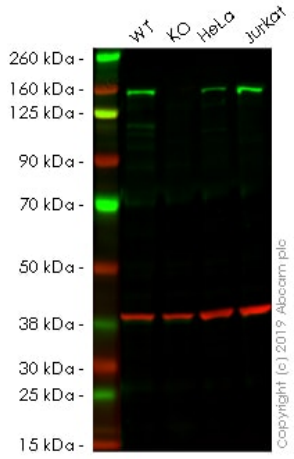
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 123 kDa
Observed band size: 112 kDa

Lanes 1 - 2: Merged signal (red and green). Green - ab172638 observed at 112 kDa. Red - loading control **ab8245** (Mouse anti-GAPDH antibody [6C5]) observed at 37 kDa.

ab172638 was shown to react with SMARCC1 in wild-type HeLa cells in Western blot with loss of signal observed in SMARCC1 knockout cell line **ab264859** (SMARCC1 knockout cell lysate **ab258198**). Wild-type HeLa and SMARCC1 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3 % milk in TBS-T (0.1 % Tween®) before incubation with ab172638 and **ab8245** (Mouse anti-GAPDH antibody [6C5]) overnight at 4 °C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 h at room temperature before imaging.



Western blot - Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade (ab172638)

All lanes : Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade (ab172638) at 1/5000 dilution

Lane 1 : Wild-type HEK293 (Human epithelial cell line from embryonic kidney) whole cell lysate
Lane 2 : SMARCC1 knockout HEK293 (Human epithelial cell line from embryonic kidney) whole cell lysate
Lane 3 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 4 : Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate

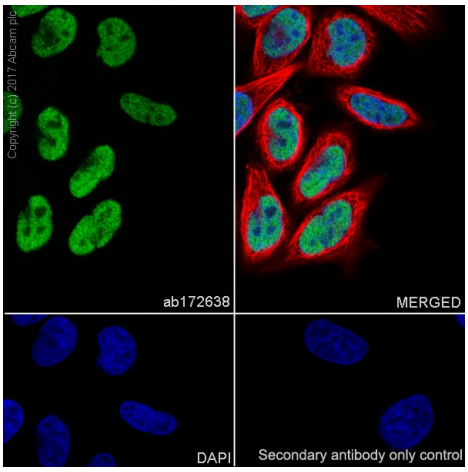
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 123 kDa

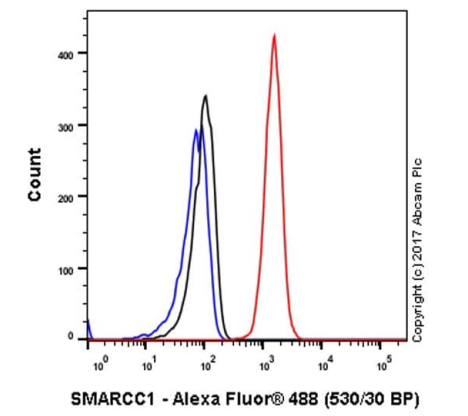
Lanes 1 - 4: Merged signal (red and green). Green - ab172638 observed at 123 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

ab172638 was shown to recognize in wild-type HEK293 cells as signal was lost at the expected MW in SMARCC1 knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and SMARCC1 knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. Ab172638 and ab8245 (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/5000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



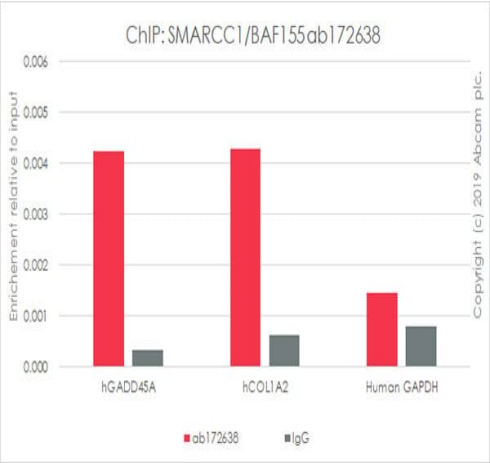
Immunocytochemistry/ Immunofluorescence - Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade (ab172638)

Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling SMARCC2 with Purified ab172638 at 1:100 dilution. 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). **ab150077** Goat anti rabbit IgG(Alexa Fluor ® 488) was used as the secondary antibody at 1:1000 dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Flow Cytometry (Intracellular) - Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade (ab172638)

Intracellular Flow Cytometry analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labeling SMARCC1/BAF155 with purified ab172638 at 1/30 dilution (red). Cells were fixed with 4% Paraformaldehyde. A Goat anti rabbit IgG (Alexa Fluor® 488) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).

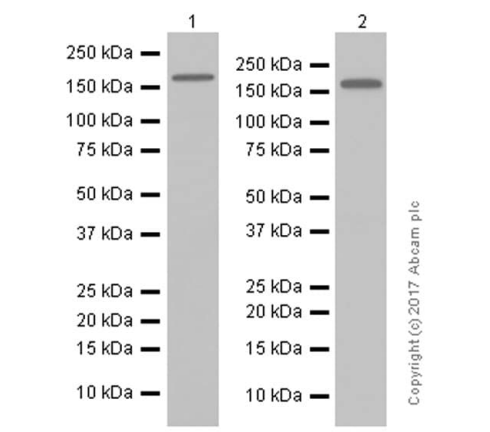


ChIP - Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade (ab172638)

Chromatin was prepared from MDA-MB-231 cells according to the Abcam X-ChIP protocol. Cells were fixed with formaldehyde for 10 minutes.

The ChIP was performed with 25 µg of chromatin, 5 µg of ab172638 (red), and 20 µl of Protein A/G sepharose beads. 5 µg of rabbit normal IgG was added to the beads control (gray). The immunoprecipitated DNA was quantified by real time PCR (Taqman approach for active and inactive loci).

Primers and probes are located in the first kb of the transcribed region.



Western blot - Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade (ab172638)

All lanes : Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade (ab172638) at 1/5000 dilution (purified)

Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates

Lane 2 : Rat testis lysates

Lysates/proteins at 15 µg per lane.

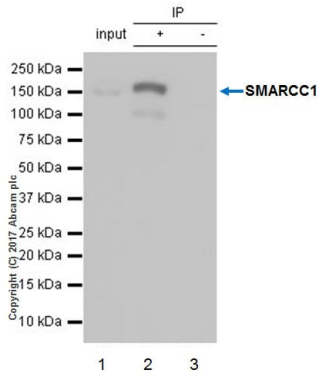
Secondary

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

Predicted band size: 123 kDa

Observed band size: 155 kDa

Blocking and diluting buffer: 5% NFDM/TBST.

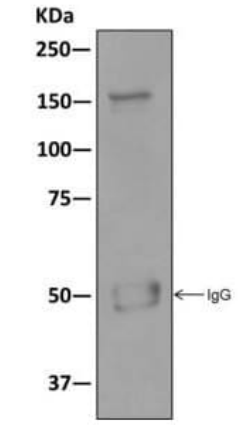


Immunoprecipitation - Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade (ab172638)

ab172638 (purified) at 1:30 dilution (2µg) immunoprecipitating SMARCC1/BAF155 in Jurkat whole cell lysate.

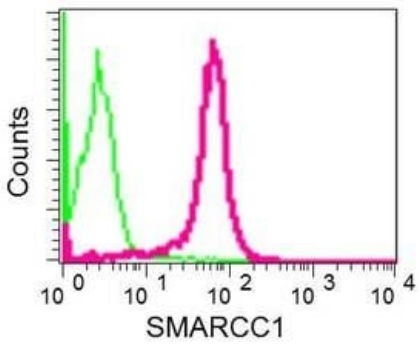
Lane 1 (input): Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate, 10µg
Lane 2 (+): ab172638 & Jurkat whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab172638 in Jurkat whole cell lysate

For western blotting, VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was used for detection at 1:1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST."



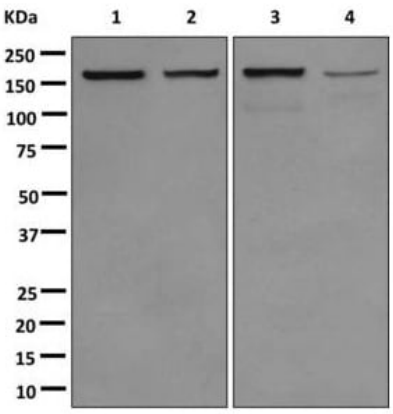
Immunoprecipitation - Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade (ab172638)

Western blot analysis on immunoprecipitation pellet from Jurkat cell lysate using unpurified ab172638 at a 1/10 dilution.



Flow Cytometry (Intracellular) - Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade (ab172638)

Intracellular flow cytometric analysis of permeabilized Jurkat cells usingunpurified ab172638 at a 1/10 dilution (red) or a rabbit IgG (negative) (green).



Western blot - Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade (ab172638)

All lanes : Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade (ab172638) at 1/1000 dilution (unpurified)

Lane 1 : HeLa cell lysate

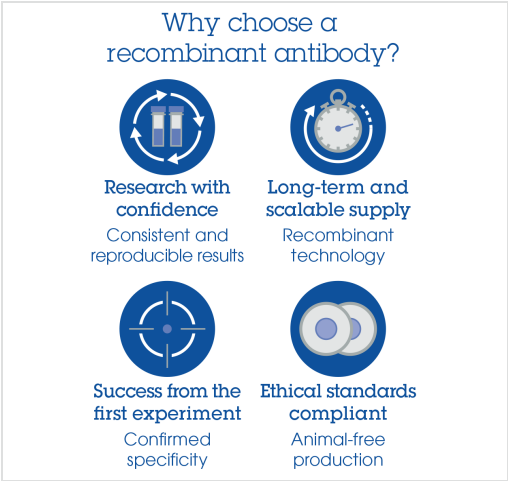
Lane 2 : K562 cell lysate

Lane 3 : Jurkat cell lysate

Lane 4 : 293T cell lysate

Lysates/proteins at 10 µg per lane.

Predicted band size: 123 kDa



Anti-SMARCC1/BAF155 antibody [EPR12395] - ChIP Grade (ab172638)

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