abcam

Product datasheet

Anti-SMARCD1 antibody [EPR23170-71] - BSA and Azide free ab269463

KO VALIDATED Recombinant RabMAb

8 Images

Overview

Product name	Anti-SMARCD1 antibody [EPR23170-71] - BSA and Azide free
Description	Rabbit monoclonal [EPR23170-71] to SMARCD1 - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, ICC/IF, IP **Unsuitable for:** IHC-P
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HeLa, 293T, NIH/3T3 and Neuro-2a lysates. ICC/IF: HeLa and Neuro-2a cells. Flow Cyt (intra): HeLa and NIH/3T3 cells. IP: HeLa and NIH/3T3 cells.
General notes	ab269463 is the carrier-free version of ab245222. Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. 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. 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. 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.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR23170-71
Isotype	IgG

Applications

The Abpromise guarantee Our Abpromise guarantee covers the use of ab269463 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)		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Detects a band of approximately 58 kDa (predicted molecular weight: 58 kDa).
ICC/IF		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.

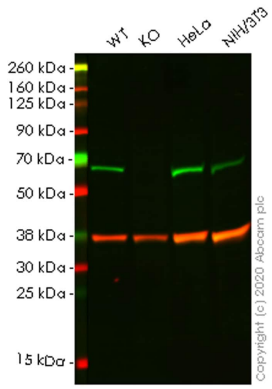
Application notes Is unsuitable for IHC-P.

Target

Function Involved in chromatin remodeling. 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 (By similarity). Has a strong influence on the Vitamin D-mediated transcriptional activity from an enhancer Vitamin D receptor element (VDRE). May be

	a link between mammalian SWI-SNF-like chromatin remodeling complexes and the vitamin D receptor (VDR) heterodimer. Mediates critical interactions between nuclear receptors and the BRG1/SMARCA4 chromatin-remodeling complex for transactivation. 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.
Tissue specificity	Expressed in all tissues tested, including brain, heart, kidney, liver, lung, muscle, pancreas and placenta.
Sequence similarities	Belongs to the SMARCD family. Contains 1 SWIB domain.
Cellular localization	Nucleus.

Images



Western blot - Anti-SMARCD1 antibody [EPR23170-71] - BSA and Azide free (ab269463)

All lanes : Anti-SMARCD1 antibody [EPR23170-71] (ab245222) at 1/1000 dilution

Lane 1 : Wild-type HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate
Lane 2 : SMARCD1 knockout HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate
Lane 3 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 4 : NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) at 1/10000 dilution

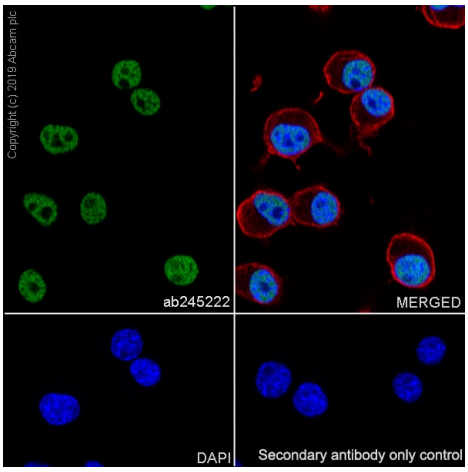
Predicted band size: 58 kDa
Observed band size: 58 kDa

This data was developed using ab245222, the same antibody clone in a different buffer formulation.

Lanes 1-4: Merged signal (red and green). Green - ab245222 observed at 58 kDa. Red - loading control ab8245 observed at 36 kDa.

ab245222 Anti-SMARCD1 antibody [EPR23170-71] was shown to

specifically react with SMARCD1 in wild-type HEK-293T cells. Loss of signal was observed when knockout cell line ab266458 (knockout cell lysate ab259143) was used. Wild-type and SMARCD1 knockout samples were subjected to SDS-PAGE. ab245222 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

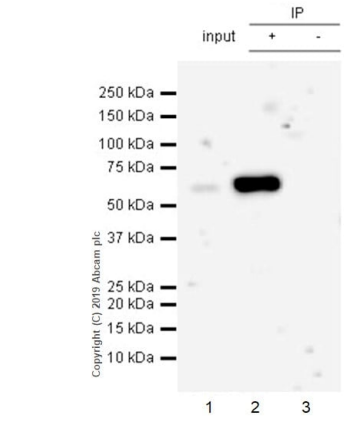


Immunocytochemistry/ Immunofluorescence - Anti-SMARCD1 antibody [EPR23170-71] - BSA and Azide free (ab269463)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Neuro-2a (mouse neuroblastoma neuroblast) cells labelling SMARCD1 with ab245222 at 1/50 dilution, followed by ab150077 AlexaFluor®488 Goat anti-Rabbit secondary antibody at 1/1000 dilution (Green). Confocal image showing nuclear staining in Neuro-2a cells. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab245222).



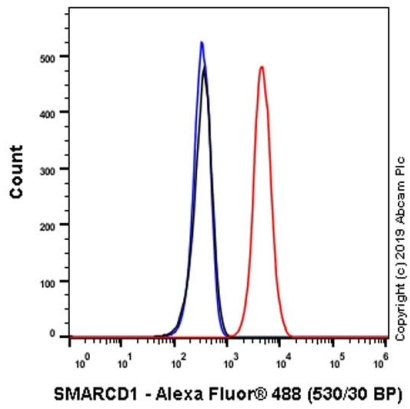
Immunoprecipitation - Anti-SMARCD1 antibody [EPR23170-71] - BSA and Azide free (ab269463)

SMARCD1 was immunoprecipitated from 0.35 mg of NIH/3T3 (Mouse embryonic fibroblast) whole cell lysate with ab245222 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab245222 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used as secondary antibody at 1/5000 dilution.

Lane 1: NIH/3T3 whole cell lysate 10 (Input).
Lane 2: ab245222 IP in NIH/3T3 whole cell lysate.
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab245222 in NIH/3T3 whole cell lysate.

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

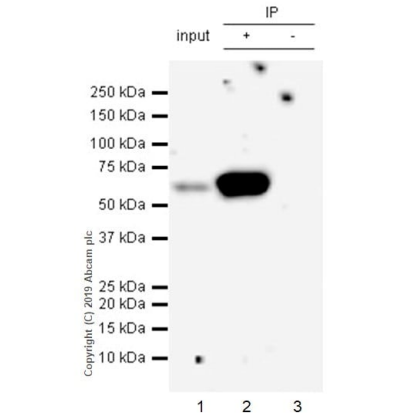
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab245222).



Flow Cytometry (Intracellular) - Anti-SMARCD1 antibody [EPR23170-71] - BSA and Azide free (ab269463)

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized HeLa (Human cervix adenocarcinoma epithelial cell) cells labelling SMARCD1 with ab245222 at 1/500 dilution (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, ab150077) at 1/2000 dilution was used as the secondary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab245222).



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Lane 1: HeLa whole cell lysate 10 (Input).
Lane 2: ab245222 IP in HeLa whole cell lysate.
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab245222 in HeLa whole cell lysate.

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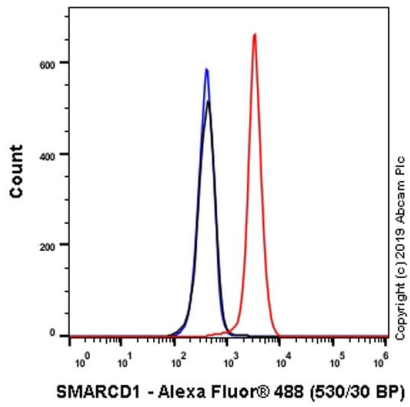

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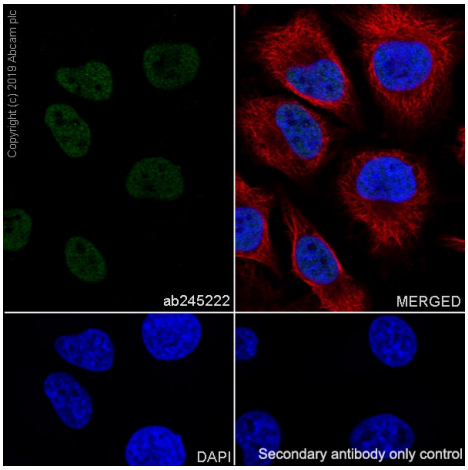

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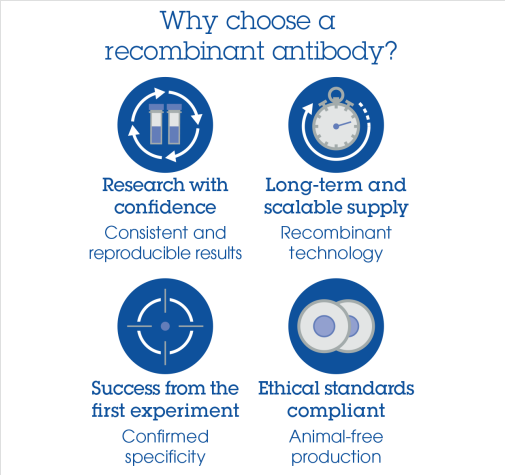

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