abcam

Product datasheet

Anti-ARID1A antibody [2035C5a] ab50878

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Overview

Product name	Anti-ARID1A antibody [2035C5a]
Description	Mouse monoclonal [2035C5a] to ARID1A
Host species	Mouse
Tested applications	**Suitable for:** WB, Flow Cyt, Dot blot
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant fragment (Human)

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.
Storage buffer	Preservative: 0.05% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4
Purity	Protein G purified
Purification notes	Filtered through a 0.22 µm membrane.
Clonality	Monoclonal
Clone number	2035C5a
Isotype	IgG1

Applications

Our Abpromise guarantee covers the use of **ab50878** in the following tested applications.

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

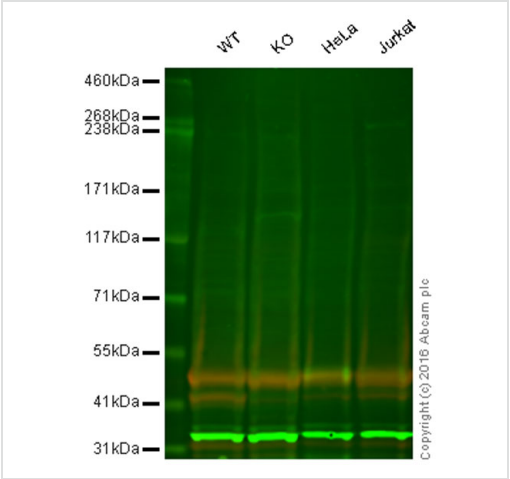
Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Predicted molecular weight: 245 kDa.

Application	Abreviews	Notes
Flow Cyt		Use 1µg for 10^6 cells. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
Dot blot		Use at an assay dependent concentration.

Target

Function	Involved in transcriptional activation and repression of select genes by chromatin remodeling (alteration of DNA-nucleosome topology). Binds DNA non-specifically. 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	Highly expressed in spleen, thymus, prostate, testis, ovary, small intestine, colon, and PBL, and at a much lower level in heart, brain, placenta, lung, liver, skeletal muscle, kidney, and pancreas.
Sequence similarities	Contains 1 ARID domain.
Post-translational modifications	Phosphorylated upon DNA damage, probably by ATM or ATR.
Cellular localization	Nucleus.

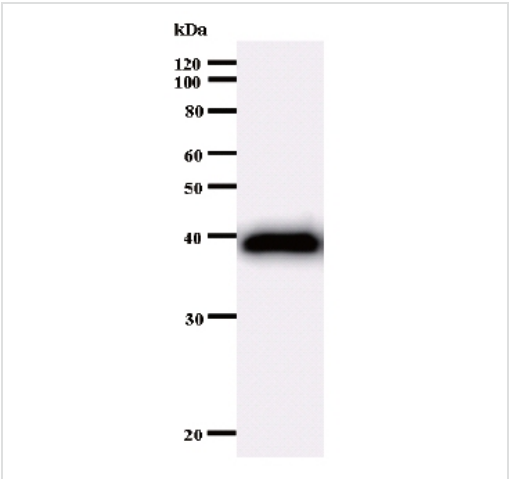
Images



Western blot - Anti-ARID1A antibody [2035C5a] (ab50878)

Lane 1: Wild-type HAP1 cell lysate (40 µg)
Lane 2: ARID1A knockout HAP1 cell lysate (40 µg)
Lane 3: Caco2 cell lysate (20 µg)
Lane 4: HeLa cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab50878 observed at n/a kDa. Red - loading control, ab18251, observed at 42 kDa.

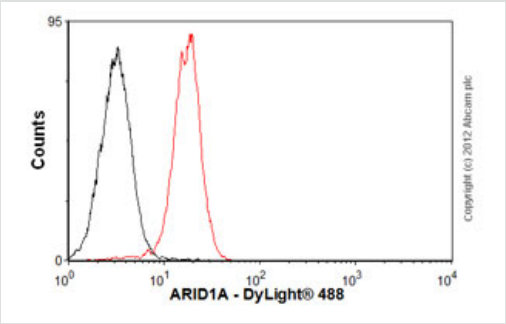
ab50878 was shown not to react with ARID1A when ARID1A knockout samples were used. Wild-type and ARID1A knockout samples were subjected to SDS-PAGE. Ab50878 and ab18251 (loading control to alpha tubulin) were diluted at 2.5 ug/ml and 1:10,000 dilution respectively and incubated overnight at 4C. Blots were developed with IRDye® 800CW Goat anti-Mouse IgG (H + L) and IRDye® 680 Goat anti-Rabbit IgG (H + L) secondary antibodies at 1:10,000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-ARID1A antibody [2035C5a] (ab50878)

Anti-ARID1A antibody [2035C5a] (ab50878) + immunizing peptide

Predicted band size: 245 kDa
Observed band size: 40 kDa



Flow Cytometry - Anti-ARID1A antibody [2035C5a] (ab50878)

Overlay histogram showing Caco-2 cells stained with ab50878 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab50878, 1µg/1x10^6 cells) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.

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