abcam

ab57461

Anti-ARID1B antibody [2D2]

Anti-ARID1B antibody [2D2] (ab57461) is a mouse monoclonal antibody detecting ARID1B in **Western Blot, Flow Cytometry, IHC-P, ICC/IF**. Suitable for **Human**.

- KO validated for confirmed specificity
- Over 20 publications
- Trusted since 2007

KO Validated

Key facts

Isotype	IgG2b
Host species	Mouse
Storage buffer	pH: 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human ARID1B aa 1350 to C-terminus. The exact immunogen used to generate this antibody is proprietary information. Database link Q8NFD5
Carrier free	Yes
Clone number	2D2
Purification technique	Affinity purification Protein A
Light chain type	kappa
Concentration	0.49 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

IP

Tested

Species	Human

Dilution info	2 µg
Notes	-

Target data

See full target information ARID1B

Function	Involved in transcriptional activation and repression of select genes by chromatin remodeling (alteration of DNA-nucleosome topology). Component of SWI/SNF chromatin remodeling complexes that carry out key enzymatic activities, changing chromatin structure by altering DNA-histone contacts within a nucleosome in an ATP-dependent manner. 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 postmitotic 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 postmitotic 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). Binds DNA non-specifically (PubMed:14982958, PubMed:15170388).

Storage

Shipped at conditions	Blue Ice
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

What is this antibody validated in?
Anti-ARID1B antibody [2D2] (ab57461) is a mouse monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in

Human samples.

What is the molecular weight of ARID1B?
Anti-ARID1B [2D2] (ab57461) specifically detects a band for ARID1B (UniProt: Q8NFD5) at a molecular weight of 236kDa.

Trusted by the scientific community
Anti-ARID1B [2D2] (ab57461) was first used in a scientific publication in 2007 and has been cited over 20 times in peer-reviewed journals.

Specificity confirmed
The specificity of Anti-ARID1B antibody [2D2] (ab57461) has been confirmed by Western blot testing in ARID1B Knockout HCT 116 cells.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	ARID1B also known as BAF250b is a component of the SWI/SNF chromatin remodeling complex. This protein has a mass of approximately 250 kDa. ARID1B interacts with DNA to regulate gene expression by modifying the chromatin structure making it more accessible for transcription machinery. It is expressed in various tissues including the brain heart and skeletal muscle suggesting a role in diverse physiological processes.
Biological function summary	The protein participates in the regulation of transcription by altering the chromatin architecture. As part of the SWI/SNF complex ARID1B works alongside other proteins to control which parts of the genome are accessible for transcription. Its activity influences numerous cellular events like cell differentiation and proliferation. The SWI/SNF complex plays a significant role in embryonic development and tumor suppression.
Pathways	ARID1B affects several critical biological processes such as Wnt signaling and cell cycle regulation. The protein interacts with beta-catenin in the Wnt pathway affecting gene expression and cell fate decisions. Additionally ARID1B modulates the cell cycle directly by influencing the expression of cyclins and cyclin-dependent kinases proteins essential for cell cycle progression.
Associated diseases and disorders	Mutations in the ARID1B gene have associations with neurodevelopmental conditions like Coffin-Siris syndrome and intellectual disabilities. The protein's malfunction can disrupt normal brain development through pathways involving CREBBP a known coactivator in transcription. Additionally ARID1B alterations appear in certain cancers often resulting in abnormal proliferation and differentiation in affected cells highlighting the importance of its regulatory functions in maintaining cellular health.

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.

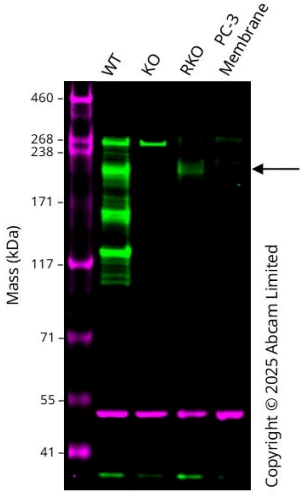
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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:
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7 product images



Western blot - Anti-ARID1B antibody [2D2] (ab57461)

ARID1B Western blot staining using mouse Anti-ARID1B antibody

Western blot: Mouse Monoclonal[2D2] to ARID1B ab57461 staining at 1/1000 dilution, shown in green; Rabbit anti alpha Tubulin (ab52866) loading control staining at 1/20,000 dilution, shown in magenta. A band was observed at 200 kDa in Wild-type HCT 116 Nuclear cell lysates with no signal observed at this size in ARID1B knockout HCT 116 Nuclear cell line. To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5pc Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4°C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Mouse 800CW & Goat anti-Rabbit 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-ARID1B antibody [2D2] (ab57461) at 1/1000 dilution

Lane 1:
Wild-type HCT 116 Nuclear at 20 µg

Lane 2:
Western blot - Human ARID1B knockout HCT116 cell line (ab287219) at 20 µg

Lane 3:
RKO at 20 µg

Lane 4:

PC-3 Membrane at 20 µg

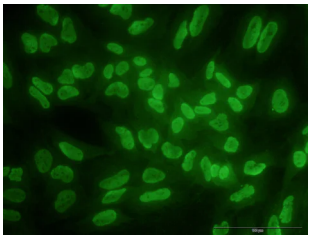
Secondary

All lanes:
Goat anti-Mouse 800CW & Goat anti-Rabbit 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 244 kDa

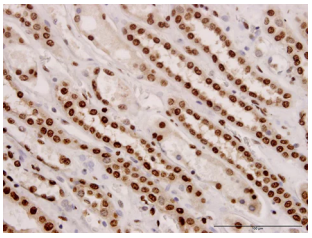
Observed band size: 200 kDa



Immunocytochemistry/ Immunofluorescence - Anti-ARID1B antibody [2D2] (ab57461)

ARID1B Immunocytochemistry/ Immunofluorescence staining of HeLa (human cervix adenocarcinoma epithelial cell) cells using mouse Anti-ARID1B antibody

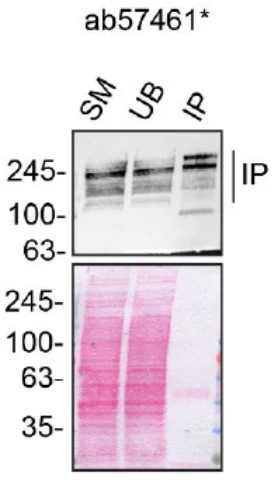
Immunocytochemistry/Immunofluorescence analysis of HeLa (human cervix adenocarcinoma epithelial cell) cells labelling ARID1B (Green) with ab57461 at 10 µg/mL concentration.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ARID1B antibody [2D2] (ab57461)

ARID1B Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of human kidney tissue using mouse Anti-ARID1B antibody

Immunoperoxidase analysis of formalin-fixed paraffin-embedded human kidney tissue labelling ARID1B with ab57461 at 3 µg/mL concentration.



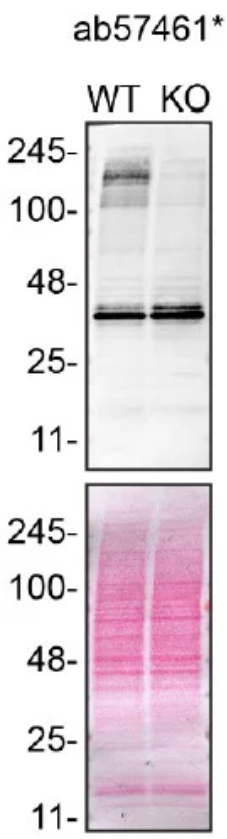
Immunoprecipitation - Anti-ARID1B antibody [2D2] (ab57461)

Immunoprecipitation of ARID1B in HCT 116 cells. Lysates were prepared and immunoprecipitation was performed using 2 µg of ab57461 pre-coupled to Protein A beads. Samples were then washed and processed for western blot.

This data was provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.
All lanes:
Immunoprecipitation - Anti-ARID1B antibody [2D2] (ab57461) at 2 µg

All lanes:
HCT 116 cell lysates

Predicted band size: 244 kDa



Western blot - Anti-ARID1B antibody [2D2] (ab57461)

ARID1B Western blot staining using mouse Anti-ARID1B antibody

ab57461 was shown to react with ARID1B in wild-type HCT 116 cells in Western blot with loss of signal observed in ARID1B knockout cell line ab287219. Wild-type HCT 116 and ARID1B knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 5% milk in TBST for 1 hr before incubation with ab57461 overnight at 4°C at a 1/1000 dilution. Blots were incubated with secondary antibodies at 0.2 µg/mL before imaging.

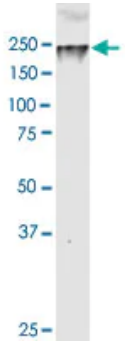
This data was provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.
All lanes:
Western blot - Anti-ARID1B antibody [2D2] (ab57461) at 1/1000 dilution

Lane 1:
Wild-type HCT 116 lysate at 30 µg

Lane 2:
ARID1B knock-out HCT 116 lysate at 30 µg

Lane 2:
Western blot - Human ARID1B knockout HCT116 cell line (ab287219)

Observed band size: 244 kDa



Western blot - Anti-ARID1B antibody [2D2] (ab57461)

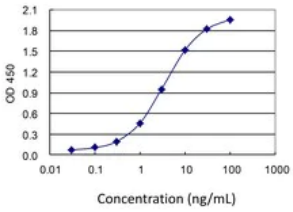
Blocking and diluting buffer and concentration: 5% non-fat milk/PBST (0.2%).
All lanes:
Western blot - Anti-ARID1B antibody [2D2] (ab57461) at 5 µg/mL

All lanes:
Western blot - Anti-ARID1B antibody [2D2] (ab57461) at 50 µg

Secondary

All lanes:
Goat Anti-Mouse IgG (H&L)-HRP Conjugate at 1/5000 dilution

Predicted band size: 236 kDa



Sandwich ELISA - Anti-ARID1B antibody [2D2] (ab57461)

Sandwich ELSIA standard curve using ab57461 as a capture antibody. Detection limit for recombinant GST tagged ARID1B is 0.03 ng/mL.

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