abcam

ab137081

Anti-BAF57/SMARCE1 antibody [EPR8849] - ChIP Grade

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR8849
Purification technique	Affinity purification Protein A
Concentration	0.515 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/250 - 1/500

Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ChIP

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information SMARCE1

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). Required for the coactivation of estrogen responsive promoters by SWI/SNF complexes and the SRC/p160 family of histone acetyltransferases (HATs). Also specifically interacts with the CoREST corepressor resulting in repression of neuronal specific gene promoters in non-neuronal cells.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

Notes

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.

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	BAF57 also known as SMARCE1 is a component of the SWI/SNF chromatin-remodeling complex. It aids in regulating the structure of chromatin influencing gene expression. BAF57 weighs approximately 53 kDa and is expressed widely across various tissue types with notable presence in the brain and reproductive organs. This protein plays an important role in reshaping chromatin making it essential for modulating the accessibility of transcription factors to DNA.
Biological function summary	As a part of the SWI/SNF complex BAF57/SMARCE1 facilitates the remodeling of chromatin impacting transcription regulation. By interacting directly with DNA BAF57 allows chromatin sliding and repositioning therefore influencing gene transcription. It plays a significant role in embryonic development neural progenitor cell proliferation and the regulation of cell cycle and differentiation processes. The protein helps modulate responses to hormonal and growth factor signals which are integral for proper cellular control.
Pathways	BAF57/SMARCE1 functions mainly within the WNT signaling and the nuclear hormone receptor pathways. It initiates changes in chromatin architecture impacting gene expression in pathways including those controlling cellular differentiation and development. Proteins like SMARCA4 and ARID1A often work alongside BAF57 in these pathways helping to modulate signal transduction processes that are important for cellular outcomes.
Associated diseases and disorders	BAF57/SMARCE1 has links to certain cancers and Coffin-Siris syndrome. Mutations in this protein or alterations in its expression can disrupt normal SWI/SNF complex function leading to abnormal cell growth and division contributing to tumor development. Additionally genetic deficits in BAF57 have associated with neural development disorders particularly through the altered function of related proteins like SMARCB1 and SMARCA4 further elucidating its role in various pathological conditions.

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

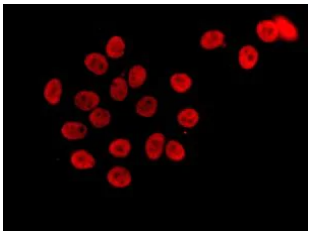
We do not recommend this combination. It is not covered by our product promise.

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.

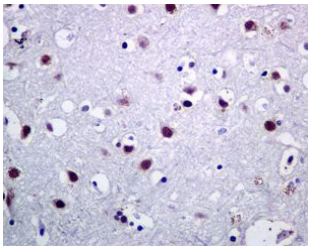
6 product images



Immunocytochemistry/ Immunofluorescence - Anti-BAF57/SMARCE1 antibody [EPR8849] - ChIP Grade (ab137081)

BAF57/SMARCE1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-BAF57/SMARCE1 antibody

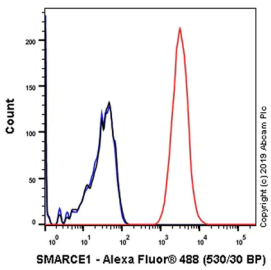
Immunofluorescent analysis of MCF7 cells labelling BAF57/SMARCE1 with ab137081 at 1/250 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-BAF57/SMARCE1 antibody [EPR8849] - ChIP Grade (ab137081)

BAF57/SMARCE1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-BAF57/SMARCE1 antibody

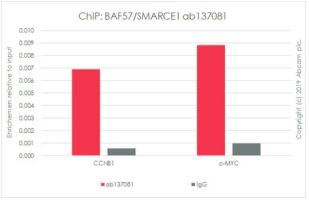
Immunohistochemical analysis of paraffin-embedded Human brain tissue labelling BAF57/SMARCE1 with ab137081 at 1/250 dilution.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-BAF57/SMARCE1 antibody [EPR8849] - ChIP Grade (ab137081)

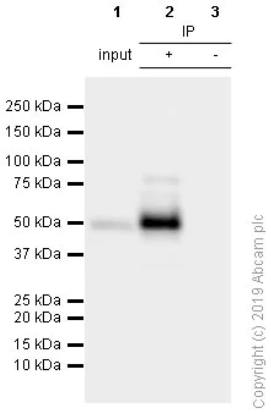
BAF57/SMARCE1 Flow Cytometry (Intracellular) staining using rabbit Anti-BAF57/SMARCE1 antibody

Intracellular Flow Cytometry analysis of MCF7 (Human breast adenocarcinoma epithelial cell) cells labeling BAF57/SMARCE1 with purified ab137081 at 1/100 dilution (10.38µg/mL) (Red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (ab172730) (black). Unlabeled control - Unlabelled cells (blue).



ChIP - Anti-BAF57/SMARCE1 antibody [EPR8849] - ChIP Grade (ab137081)

Chromatin was prepared from HeLa cells according to the Abcam Dual-X-ChIP protocol. Cells were fixed with EGS for 30 minutes, then formaldehyde for 10 minutes.
The ChIP was performed with 25 µg of chromatin, 5 µg of ab137081 (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 (Sybr green approach).
Primers and probes are located in the first kb of the transcribed region.



Immunoprecipitation - Anti-BAF57/SMARCE1 antibody [EPR8849] - ChIP Grade (ab137081)

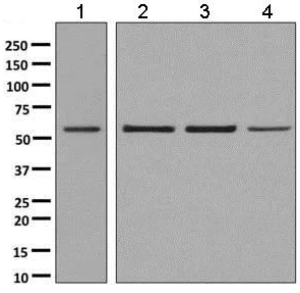
ab137081 (purified) at 1/20 dilution immunoprecipitating BAF57/SMARCE1 in MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysate 10 µg.

Lane 1 (input): MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysate 10 µg
Lane 2 (+): ab137081 & MCF7 whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab137081 in MCF7 whole cell lysate

For western blotting, ab137081 at 1/500 dilution (0.02 µg/mL) and veriBlot for IP secondary antibody (HRP) (ab131366) at 1/1000 dilution was used.

Blocking and diluting buffer: 5% NFDM /TBST.
All lanes:
Immunoprecipitation - Anti-BAF57/SMARCE1 antibody [EPR8849] - ChIP Grade (ab137081)

Predicted band size: 47 kDa



Western blot - Anti-BAF57/SMARCE1 antibody [EPR8849] - ChIP Grade (ab137081)

All lanes:
Western blot - Anti-BAF57/SMARCE1 antibody [EPR8849] - ChIP Grade (ab137081) at 1/1000 dilution

Lane 1:
MCF7 cell lysates at 10 µg

Lane 2:

HeLa cell lysates at 10 µg

Lane 3:
Jurkat cell lysates at 10 µg

Lane 4:
Raji cell lysates at 10 µg

Secondary

All lanes:
goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 47 kDa

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