abcam

ab180575

Anti-SAMD9 antibody [EPR13603]

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	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	EPR13603
Purification technique	Affinity purification Protein A
Concentration	0.251 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

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

ICC/IF

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/30 - 1/50
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information SAMD9

Function	Double-stranded nucleic acid binding that acts as an antiviral factor by playing an essential role in the formation of cytoplasmic antiviral granules (PubMed:25428864, PubMed:28157624). May play a role in the inflammatory response to tissue injury and the control of extra-osseous calcification, acting as a downstream target of TNF signaling. Involved in the regulation of EGR1, in coordination with RGL2. May be involved in endosome fusion.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
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

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	SAMD9 also known as sterile alpha motif domain-containing 9 is an intriguing protein with a molecular mass of approximately 180 kDa. Predominantly expressed in tissues such as bone marrow and lymph nodes it plays a role in cellular proliferation and response to stress stimuli. The protein is part of the larger family of SAMD proteins which contain sterile alpha motifs influencing protein-protein interactions and it engages in regulation steps at a molecular level.
Biological function summary	SAMD9 takes part in controlling cellular proliferation and inhibiting abnormal growth mostly acting as a growth suppressor. Its functions link to maintaining homeostasis within cells and aiding in preventing uncontrolled cell expansion. SAMD9 functions independently of any known stable protein complex performing its regulatory role in diverse cellular contexts. The protein's involvement spans multiple cell types reflecting its broad impact on normal human physiology.
Pathways	SAMD9 interacts with critical signaling modules such as the mTOR pathway and the interferon signaling pathway. It modulates cellular responses related to growth control and stress adaptation. Interactions with other proteins like TSC1 and TSC2 within the mTOR pathway highlight SAMD9's engagement in regulating cellular responses to environmental changes and nutrient availability.
Associated diseases and disorders	SAMD9 is associated with severe conditions like myelodysplastic syndromes and MIRAGE syndrome. These conditions link to mutations affecting the protein's regulatory capacities leading to disrupted cellular processes and disease progression. The protein shares connections with SAMD9L another related protein indicating a potential overlap in disease mechanisms and impacts. Understanding the behavior of SAMD9 in these contexts is important for developing therapeutic strategies and improving disease management.

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

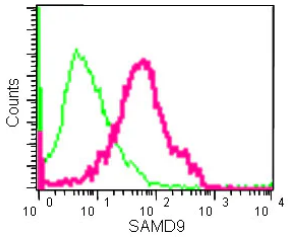
We do not recommend this combination. It is not covered by our product promise.

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.

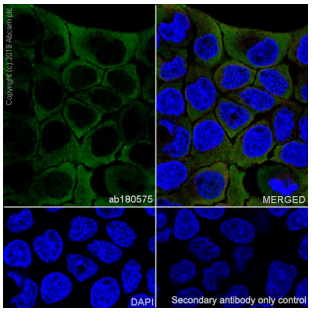
8 product images



Flow Cytometry (Intracellular) - Anti-SAMD9 antibody [EPR13603] (ab180575)

SAMD9 Flow Cytometry (Intracellular) staining using rabbit Anti-SAMD9 antibody

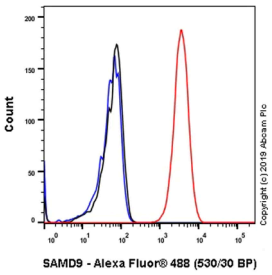
Intracellular flow cytometric analysis of 2% paraformaldehyde-fixedA431 cells labeling SAMD9 with ab180575 (unpurified) at 1/50 dilution, or Rabbit monoclonal IgG Isotype control.



Immunocytochemistry/ Immunofluorescence - Anti-SAMD9 antibody [EPR13603] (ab180575)

SAMD9 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SAMD9 antibody

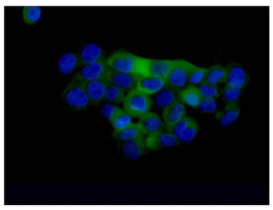
Immunocytochemistry/ Immunofluorescence analysis of A431 (Human epidermoid carcinoma epithelial cell) cells labeling SAMD9 with purified ab180575 at 1:50 dilution (5.4 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with none. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Flow Cytometry (Intracellular) - Anti-SAMD9 antibody [EPR13603] (ab180575)

SAMD9 Flow Cytometry (Intracellular) staining using rabbit Anti-SAMD9 antibody

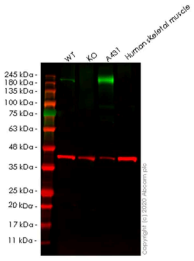
Intracellular Flow Cytometry analysis of MCF-7 (Human breast adenocarcinoma epithelial cell) cells labeling SAMD9 with purified ab180575 at 1/30 dilution (10 µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunocytochemistry/ Immunofluorescence - Anti-SAMD9 antibody [EPR13603] (ab180575)

SAMD9 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SAMD9 antibody

Immunofluorescence analysis of 4% paraformaldehyde-A431 cells labeling SAMD9 with ab180575 (unpurified) (green) at 1/100 dilution. Dapi counterstain (blue). Goat anti rabbit IgG (Dylight 488) at a dilution of 1/200 was used as a secondary antibody.



Western blot - Anti-SAMD9 antibody [EPR13603] (ab180575)

SAMD9 Western blot staining using rabbit Anti-SAMD9 antibody

Lanes 1-4: Merged signal (red and green). Green - ab180575 observed at 184 kDa. Red - loading control ab8245 observed at 36 kDa.
ab180575 Anti-SAMD9 antibody [EPR13603] was shown to specifically react with SAMD9 in wild-type A549 cells. Loss of signal was observed when knockout cell line ab267038 (knockout cell lysate ab257656) was used. Wild-type and SAMD9 knockout samples were subjected to SDS-PAGE. ab180575 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated at room temperature for 2.5 hours 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.

All lanes:
Western blot - Anti-SAMD9 antibody [EPR13603] (ab180575) at 1/1000 dilution

Lane 1:
Wild-type A549 cell lysate at 20 µg

Lane 2:
Western blot - Human SAMD9 knockout A549 cell lysate (ab257656) at 20 µg

Lane 3:
A431 cell lysate at 20 µg

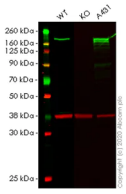
Lane 4:
Human skeletal muscle cell lysate at 20 µg

Secondary

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

Predicted band size: 184 kDa

Observed band size: 184 kDa



Western blot - Anti-SAMD9 antibody [EPR13603] (ab180575)

SAMD9 Western blot staining using rabbit Anti-SAMD9 antibody

Lanes 1-3: Merged signal (red and green). Green - ab180575 observed at 184 kDa. Red - loading control ab8245 observed at 36 kDa.
ab180575 Anti-SAMD9 antibody [EPR13603] was shown to specifically react with SAMD9 in wild-type A549 cells. Loss of signal was observed when knockout cell line ab267039 (knockout cell lysate ab257657) was used. Wild-type and SAMD9 knockout samples were subjected to SDS-PAGE. ab180575 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.

All lanes:
Western blot - Anti-SAMD9 antibody [EPR13603] (ab180575) at 1/1000 dilution

Lane 1:
Wild-type A549 cell lysate at 20 µg

Lane 2:
SAMD9 knockout A549 cell lysate at 20 µg

Lane 2:
Western blot - Human SAMD9 knockout A549 cell line (ab267039)

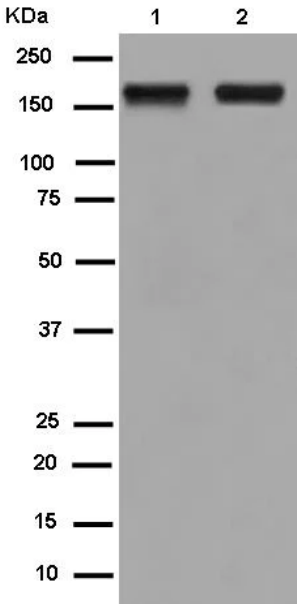
Lane 3:
A431 cell lysate at 20 µg

Secondary

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

Predicted band size: 184 kDa

Observed band size: 184 kDa



Western blot - Anti-SAMD9 antibody [EPR13603] (ab180575)

SAMD9 Western blot staining using rabbit Anti-SAMD9 antibody

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

All lanes:
Western blot - Anti-SAMD9 antibody [EPR13603] (ab180575) at 1/10000 dilution

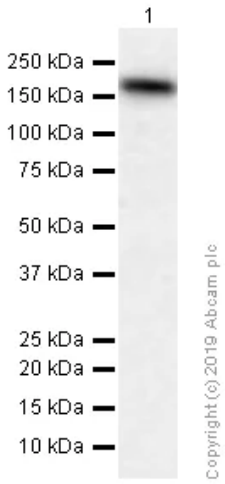
Lane 1:
A431 cell lysate at 20 µg

Lane 2:
MCF-7 cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-rabbit HRP at 1/1000 dilution

Predicted band size: 184 kDa



Western blot - Anti-SAMD9 antibody [EPR13603] (ab180575)

All lanes:
Western blot - Anti-SAMD9 antibody [EPR13603] (ab180575) at 1/1000 dilution

All lanes:
MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysates at 15 µg

Secondary

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

Predicted band size: 184 kDa

Observed band size: 184 kDa

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