

Product datasheet

Anti-SMYD3 antibody [EPR11107(2)] ab187149

KO VALIDATED Recombinant RabMAb

9 References 9 Images

Overview

Product name	Anti-SMYD3 antibody [EPR11107(2)]
Description	Rabbit monoclonal [EPR11107(2)] to SMYD3
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, ICC/IF, Flow Cyt, IP
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide within Human SMYD3 aa 250-350 (internal sequence). The exact sequence is proprietary. Database link: Q9H7B4
Positive control	WB: Wild-type HAP1, MCF7, HeLa, HEK-293, T47-D and NIH/3T3 cell lysates; Mouse brain and Rat spleen tissue lysates. IHC-P: Human colonic carcinoma and mouse skeletal muscle tissues. ICC/IF: MCF7 and HeLa cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise[™] guarantee.</p> <p>In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications & species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee.</p>

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

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. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR11107(2)
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab187149** 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		1/1000 - 1/20000. Detects a band of approximately 45 kDa (predicted molecular weight: 49 kDa).
IHC-P		1/100. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
ICC/IF		1/250.
Flow Cyt		1/30. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
IP		1/40 - 1/60.

Target

Function	Histone methyltransferase. Specifically methylates 'Lys-4' of histone H3, inducing di- and tri-methylation, but not monomethylation. Plays an important role in transcriptional activation as a member of an RNA polymerase complex. Binds DNA containing 5'-CCCTCC-3' or 5'-GAGGGG-3' sequences.
Tissue specificity	Expressed in skeletal muscles and testis. Overexpressed in a majority of colorectal and

hepatocellular carcinomas.

Sequence similarities

Belongs to the histone-lysine methyltransferase family.

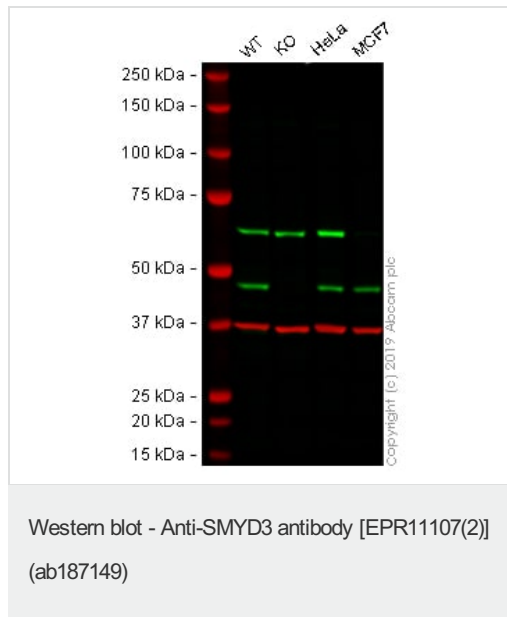
Contains 1 MYND-type zinc finger.

Contains 1 SET domain.

Cellular localization

Cytoplasm. Nucleus. Mainly cytoplasmic when cells are arrested at G0/G1. Accumulates in the nucleus at S phase and G2/M.

Images



All lanes : Anti-SMYD3 antibody [EPR11107(2)] (ab187149) at 1/1000 dilution

Lane 1 : Wild-type HAP1 whole cell lysate

Lane 2 : SMYD3 knockout HAP1 whole cell lysate

Lane 3 : HeLa whole cell lysate

Lane 4 : MCF7 whole cell lysate

Lysates/proteins at 20 µg per lane.

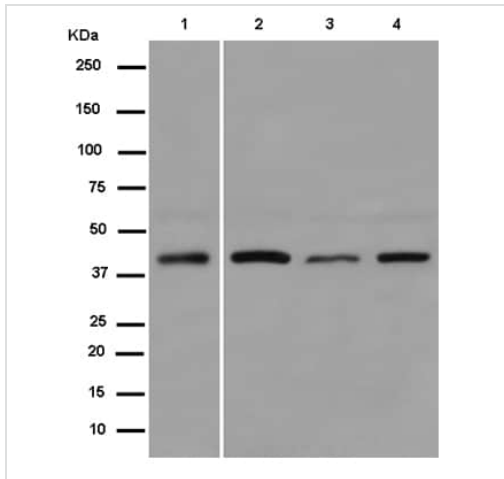
Performed under reducing conditions.

Predicted band size: 49 kDa

Observed band size: 49 kDa

Lanes 1 - 4: Merged signal (red and green). Green - ab187149 observed at 49 kDa. Red - loading control, [ab8245](#) (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

ab187149 was shown to react with SMYD3 in HAP1 wild-type cells in Western blot. Loss of signal was observed when SMYD3 knockout sample was used. HAP1 wild-type and SMYD3 knockout whole cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3% Milk in TBS-T (0.1% Tween[®]) before incubation with ab187149 and [ab8245](#) (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye[®] 800CW) preabsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye[®] 680RD) preabsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-SMYD3 antibody [EPR11107(2)] (ab187149)

All lanes : Anti-SMYD3 antibody [EPR11107(2)] (ab187149) at 1/20000 dilution

Lane 1 : MCF7 (human breast adenocarcinoma cell line) cell lysate

Lane 2 : HeLa (human epithelial cell line from cervix adenocarcinoma) cell lysate

Lane 3 : HEK-293 (human epithelial cell line from embryonic kidney) cell lysate

Lane 4 : T47-D (human ductal breast epithelial tumor cell line) cell lysate

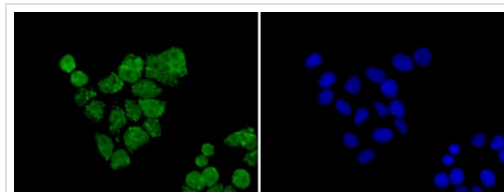
Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

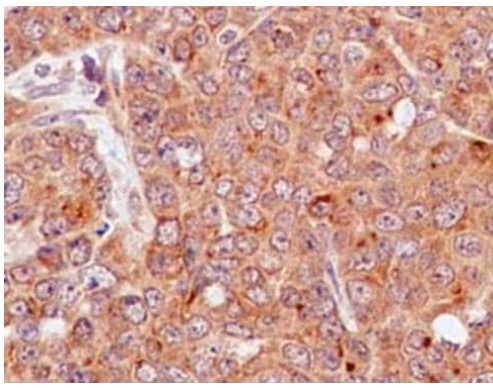
Predicted band size: 49 kDa

Blocking and dilution buffer: 5% NFDm/TBST



Immunocytochemistry/ Immunofluorescence - Anti-SMYD3 antibody [EPR11107(2)] (ab187149)

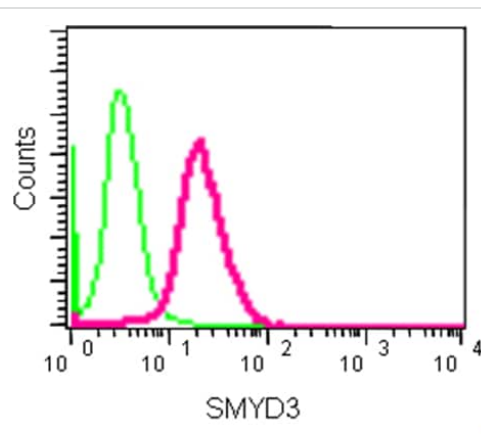
Immunofluorescent analysis of 4% paraformaldehyde-fixed MCF7 (human breast adenocarcinoma cell line) cells, labeling SMYD3 with ab187149 at 1/250 dilution (left image; green); secondary antibody was Goat anti rabbit IgG Alexa Fluor[®]488, and counterstained with Dapi (right image; blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SMYD3 antibody [EPR11107(2)] (ab187149)

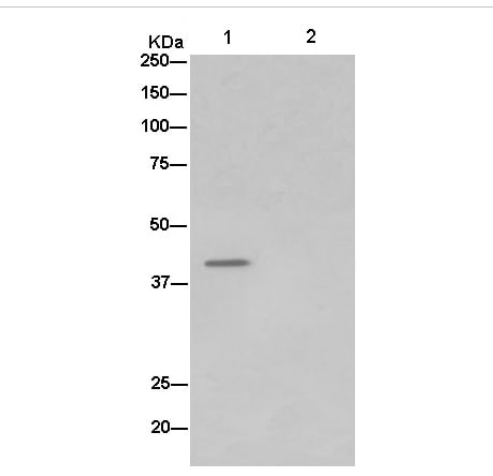
Immunohistochemical analysis of paraffin-embedded human colonic carcinoma tissue, labeling SMYD3 with ab187149 at 1/100 dilution. Counterstained with Hematoxylin.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



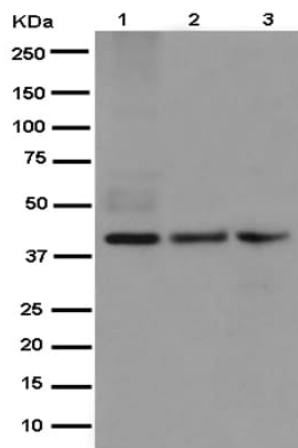
Flow Cytometry - Anti-SMYD3 antibody [EPR11107(2)] (ab187149)

Immunohistochemical analysis of 2% paraformaldehyde-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cells, labeling SMYD3 with ab187149 at 1/30 dilution. Secondary antibody was Goat anti rabbit IgG (FITC) at 1/150 dilution. Isotype control was a Rabbit monoclonal IgG.



Immunoprecipitation - Anti-SMYD3 antibody [EPR11107(2)] (ab187149)

Immunoprecipitation analysis of HeLa (human epithelial cell line from cervix adenocarcinoma) cell lysate labeling SMYD3 using ab187149 at 1/50 dilution (Lane 1). A Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1500 was used as secondary antibody. Lane 2: PBS instead of HeLa lysate.



Western blot - Anti-SMYD3 antibody [EPR11107(2)] (ab187149)

All lanes : Anti-SMYD3 antibody [EPR11107(2)] (ab187149) at 1/5000 dilution

Lane 1 : Mouse brain tissue lysate

Lane 2 : Rat spleen tissue lysate

Lane 3 : NIH/3T3 cell lysate

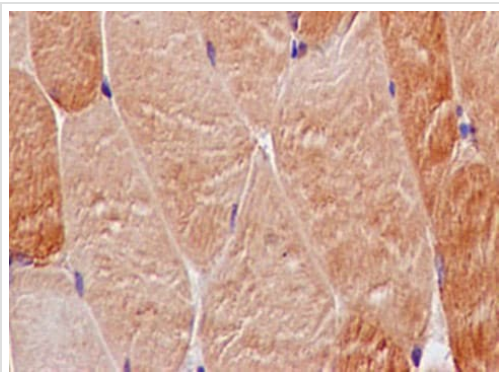
Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 49 kDa

Blocking and dilution buffer: 5% NFDM/TBST



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SMYD3 antibody [EPR11107(2)] (ab187149)

Immunohistochemical analysis of paraffin-embedded mouse skeletal muscle tissue, labeling SMYD3 with ab187149 at 1/100 dilution. Counterstained with Hematoxylin.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-SMYD3 antibody [EPR11107(2)] (ab187149)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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