abcam

Product datasheet

Anti-SMYD3 antibody [EPR11107(2)] ab187149

KO VALIDATED Recombinant RabMAb

13 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:** Flow Cyt (Intra), WB, IHC-P, ICC/IF, IP
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
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	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

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

The Abpromise guarantee 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
Flow Cyt (Intra)		1/30. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
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.
IP		1/40 - 1/60.

Target

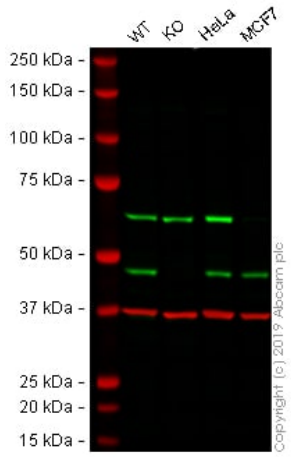
Function Histone methyltransferase. Specifically methylates 'Lys-4' of histone H3, inducing di- and tri-methylation, but not monomethylation. Plays an important role in transcriptional activation as a member of an RNA polymerase complex. Binds DNA containing 5'-CCCTCC-3' or 5'-GAGGGG-3' sequences.

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



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

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

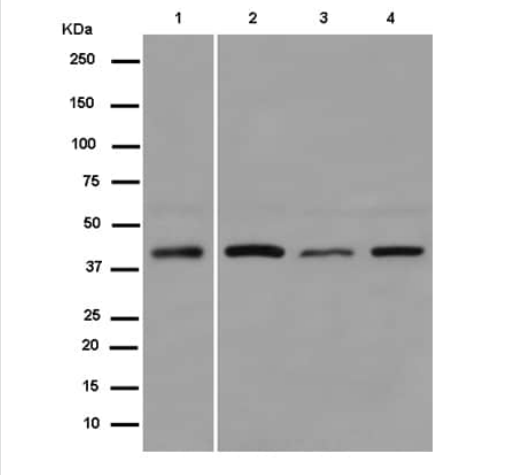
Lysates/proteins at 20 µg per lane.

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

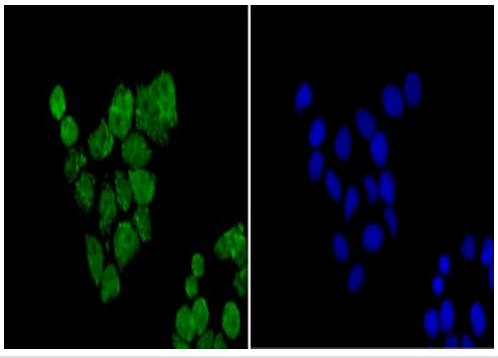
Lane 1 : MCF7 (human breast adenocarcinoma cell line) cell lysate
Lane 2 : HeLa (human epithelial cell line from cervix adenocarcinoma) cell lysate
Lane 3 : HEK-293 (human epithelial cell line from embryonic kidney) cell lysate
Lane 4 : T47-D (human ductal breast epithelial tumor cell line) cell lysate

Lysates/proteins at 20 µg per lane.

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

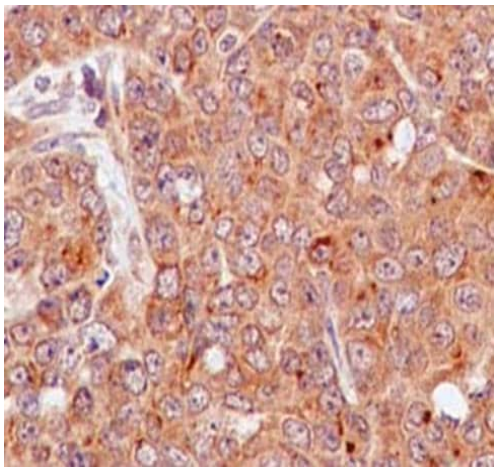
Predicted band size: 49 kDa

Blocking and dilution buffer: 5% NFDM/TBST



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

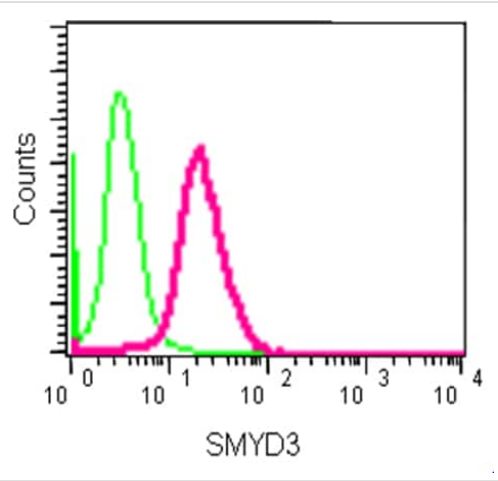
Immunofluorescent analysis of 4% paraformaldehyde-fixed MCF7 (human breast adenocarcinoma cell line) cells, labeling SMYD3 with ab187149 at 1/250 dilution (left image; green); secondary antibody was Goat anti rabbit IgG Alexa Fluor®488, and counterstained with Dapi (right image; blue).



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

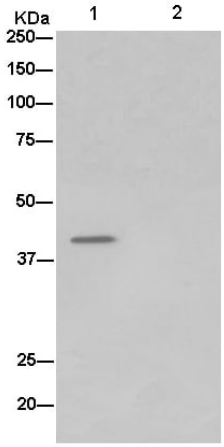
Immunohistochemical analysis of paraffin-embedded human colonic carcinoma tissue, labeling SMYD3 with ab187149 at 1/100 dilution. Counterstained with Hematoxylin.

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



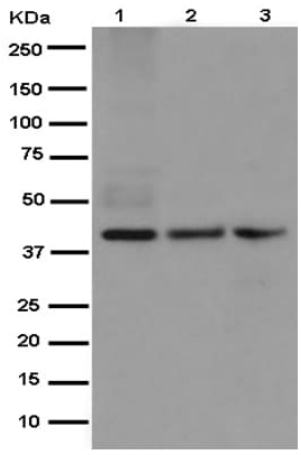
Flow Cytometry (Intracellular) - Anti-SMYD3 antibody [EPR11107(2)] (ab187149)

Intracellular flow cytometric analysis of 2%paraformaldehyde-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cells, labeling SMYD3 with ab187149 at 1/30 dilution. Secondary antibody wasGoat 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

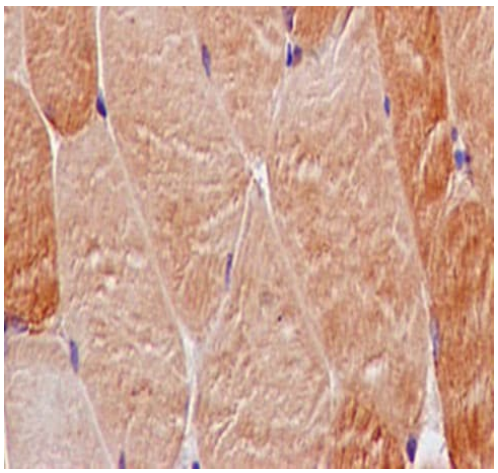
Lane 1 : Mouse brain tissue lysate
Lane 2 : Rat spleen tissue lysate
Lane 3 : NIH/3T3 cell lysate

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.

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

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