abcam

Product datasheet

# Anti-SMYD3 antibody [EPR11106(2)] - N-terminal ab183498

KO VALIDATED Recombinant RabMAb

3 References 9 Images

## Overview

| | |
|---|---|
| **Product name** | Anti-SMYD3 antibody [EPR11106(2)] - N-terminal |
| **Description** | Rabbit monoclonal [EPR11106(2)] to SMYD3 - N-terminal |
| **Host species** | Rabbit |
| **Tested applications** | **Suitable for:** Flow Cyt (Intra), IHC-P, WB, ICC/IF, IP |
| **Species reactivity** | **Reacts with:** Human |
| **Immunogen** | Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. |
| **Positive control** | WB: HeLa, HAP1, 293, MCF-7 and T47-D cell lysates. IHC-P: Human testis and skeletal muscle tissue. ICC: HeLa cells. Flow Cyt (intra): 293 cells. |
| **General notes** | This product is a recombinant monoclonal antibody, which offers several advantages including:<br>- High batch-to-batch consistency and reproducibility<br>- Improved sensitivity and specificity<br>- Long-term security of supply<br>- Animal-free production<br>For more information **see here**.<br>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<br>Preservative: 0.01% Sodium azide<br>Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA |
| **Purity** | Protein A purified |
| **Clonality** | Monoclonal |
| **Clone number** | EPR11106(2) |

**Isotype** IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab183498 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)** | | Use at an assay dependent concentration. |
| **IHC-P** | | 1/50 - 1/100. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. |
| **WB** | | 1/1000 - 1/10000. Detects a band of approximately 45 kDa (predicted molecular weight: 49 kDa). |
| **ICC/IF** | | 1/500. |
| **IP** | | 1/40 - 1/60. |

## Target

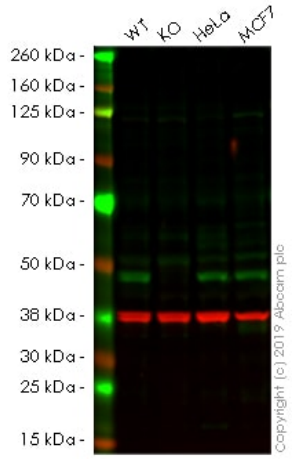
**Function** Histone methyltransferase. Specifically methylates 'Lys-4' of histone H3, inducing di- and tri-methylation, but not monomethylation. Plays an important role in transcriptional activation as a member of an RNA polymerase complex. Binds DNA containing 5'-CCCTCC-3' or 5'-GAGGGG-3' sequences.

**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 [EPR11106(2)] - N-terminal (ab183498)

**All lanes :** Anti-SMYD3 antibody [EPR11106(2)] - N-terminal (ab183498) at 1/1000 dilution

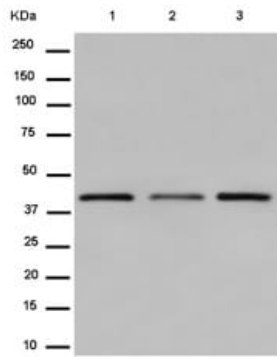
**Lane 1 :** Wild-type HAP1 whole cell lysate
**Lane 2 :** SMYD3 knockout HAP1 whole cell lysate
**Lane 3 :** HeLa whole cell lysate
**Lane 4 :** MCF7 whole cell lysate

Lysates/proteins at 20 µg per lane.

**Predicted band size:** 49 kDa

**Lanes 1 - 4:** Merged signal (red and green). Green - ab183498 observed at 49 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

ab183498 was shown to recognize SMYD3 in wild-type HAP1 cells as signal was lost at the expected MW in SMYD3 knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and SMYD3 knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. Ab183498 and **ab8245** (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 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 1/20000 dilution for 1 hour at room temperature before imaging.




Western blot - Anti-SMYD3 antibody [EPR11106(2)] - N-terminal (ab183498)

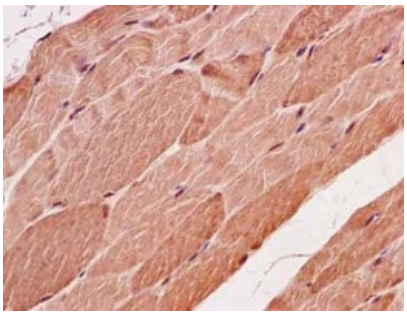
**All lanes :** Anti-SMYD3 antibody [EPR11106(2)] - N-terminal (ab183498) at 1/10000 dilution

**Lane 1 :** HeLa lysate
**Lane 2 :** 293 lysate
**Lane 3 :** T47-D lysate

Lysates/proteins at 20 µg per lane.

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

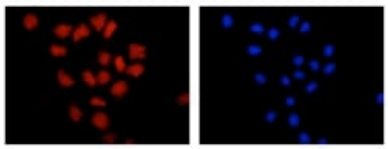
**Predicted band size:** 49 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SMYD3 antibody [EPR11106(2)] - N-terminal (ab183498)

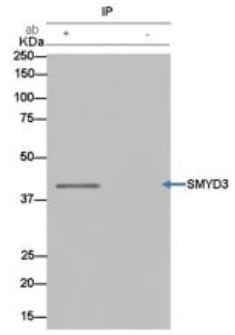
Immunohistochemical analysis of paraffin-embedded Human skeletal muscle labeling SMYD3 at 1/100 dilution and HRP Polymer for Rabbit IgG. Counterstained with Hematoxylin.

Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



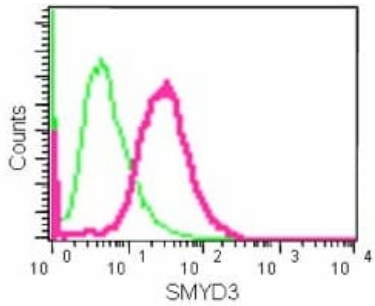
Immunocytochemistry/ Immunofluorescence - Anti-SMYD3 antibody [EPR11106(2)] - N-terminal (ab183498)

Flow cytometric analysis of HeLa cells fixed in 20 °C acetone labeling SMYD3 at 1/500 dilution and Goat anti rabbit IgG(Alexa Fluor® 555) at 1/200 (red). Counterstained with DAPI (blue)



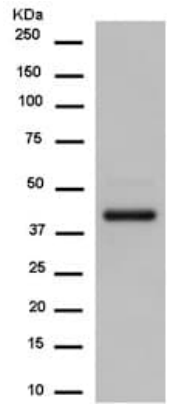

Immunoprecipitation - Anti-SMYD3 antibody [EPR11106(2)] - N-terminal (ab183498)

Immunoprecipitation of HeLa cells labeling SMYD3 with ab183498 at 1/50 dilution and Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1500.




Flow Cytometry (Intracellular) - Anti-SMYD3 antibody [EPR11106(2)] - N-terminal (ab183498)

Intracellular flow cytometric analysis of 293 cells fixed in 2% paraformaldehyde labeling SMYD3 with ab183498 at 1/110 dilution andGoat anti rabbit IgG (FITC) at 1/150 dilution. Rabbit Monoclonal IgG was used as an isotype control.



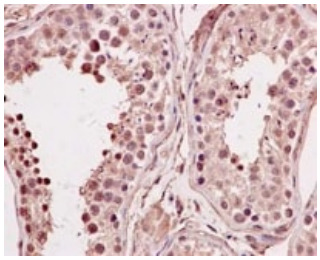

Western blot - Anti-SMYD3 antibody [EPR11106(2)] - N-terminal (ab183498)

Anti-SMYD3 antibody [EPR11106(2)] - N-terminal (ab183498) at 1/2000 dilution + MCF-7 lysate at 20 µg

**Secondary**

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

**Predicted band size:** 49 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SMYD3 antibody [EPR11106(2)] - N-terminal (ab183498)

Immunohistochemical analysis of paraffin-embedded Human testis labeling SMYD3 with ab183498 at 1/100 dilution and HRP Polymer for Rabbit IgG. Counterstained with Hematoxylin.

Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.


Anti-SMYD3 antibody [EPR11106(2)] - N-terminal (ab183498)



## Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

## Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors