abcam

Product datasheet

Anti-KMT1E / SETDB1 antibody [5H6A12] ab107225

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Overview

Product name	Anti-KMT1E / SETDB1 antibody [5H6A12]
Description	Mouse monoclonal [5H6A12] to KMT1E / SETDB1
Host species	Mouse
Tested applications	**Suitable for:** Flow Cyt, WB, ICC/IF
Species reactivity	**Reacts with:** Mouse, Human, African green monkey
Immunogen	Purified recombinant fragment of human SETDB1 expressed in E. Coli.
Positive control	MCF-7,T47D, HEK293, JURKAT, NIH/3T3, F9, RAW246.7 and COS-7 cell lysates.
General notes	This product was changed from ascites to supernatant. Lot no's high than GR223392-13 are from Tissue Culture Supernatant The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. 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, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.05% Sodium azide Constituent: PBS
Purity	Protein G purified
Purification notes	Purified from tissue culture supernatant.
Clonality	Monoclonal
Clone number	5H6A12
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab107225 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		1/100. **ab170190** - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
WB	★★★★★ (1)	1/500 - 1/2000. Predicted molecular weight: 180 kDa.
ICC/IF	★☆☆☆☆ (1)	1/200 - 1/1000.

Target

Function Histone methyltransferase that specifically trimethylates 'Lys-9' of histone H3. H3 'Lys-9' trimethylation represents a specific tag for epigenetic transcriptional repression by recruiting HP1 (CBX1, CBX3 and/or CBX5) proteins to methylated histones. Mainly functions in euchromatin regions, thereby playing a central role in the silencing of euchromatic genes. H3 'Lys-9' trimethylation is coordinated with DNA methylation. Probably forms a complex with MBD1 and ATF7IP that represses transcription and couples DNA methylation and histone 'Lys-9' trimethylation. Its activity is dependent on MBD1 and is heritably maintained through DNA replication by being recruited by CAF-1. SETDB1 is targeted to histone H3 by TRIM28/TIF1B, a factor recruited by KRAB zinc-finger proteins.

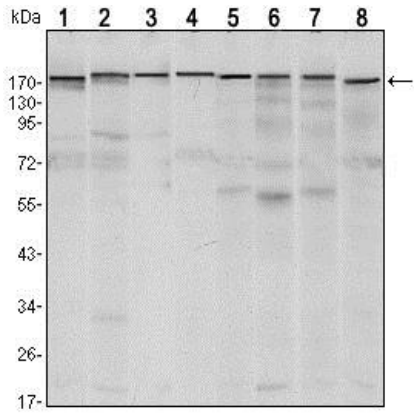
Tissue specificity Widely expressed. High expression in testis.

Sequence similarities Belongs to the histone-lysine methyltransferase family. Suvar3-9 subfamily.
Contains 1 MBD (methyl-CpG-binding) domain.
Contains 1 post-SET domain.
Contains 1 pre-SET domain.
Contains 1 SET domain.
Contains 2 Tudor domains.

Domain The pre-SET, SET and post-SET domains are all required for methyltransferase activity. The 347-amino-acid insertion in the SET domain has no effect on the catalytic activity.
Isoform 2 lacks all domains required for histone methyltransferase activity.

Cellular localization Nucleus. Chromosome. Associated with non-pericentromeric regions of chromatin. Excluded from nucleoli and islands of condensed chromatin.

Images

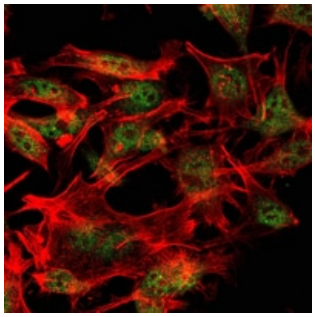


Western blot - Anti-KMT1E / SETDB1 antibody [5H6A12] (ab107225)

All lanes : Anti-KMT1E / SETDB1 antibody [5H6A12] (ab107225) at 1/500 dilution

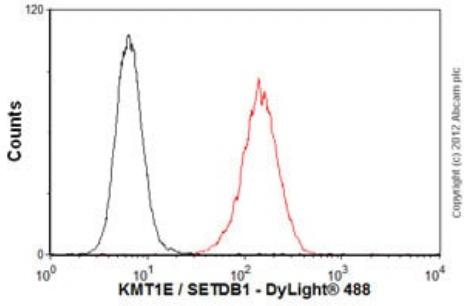
Lane 1 : MCF-7
Lane 2 : T47D
Lane 3 : HEK293
Lane 4 : JURKAT
Lane 5 : NIH/3T3
Lane 6 : F9
Lane 7 : RAW264.7
Lane 8 : COS-7

Predicted band size: 180 kDa



Immunocytochemistry/ Immunofluorescence - Anti-KMT1E / SETDB1 antibody [5H6A12] (ab107225)

Immunofluoresence detection of SETDB1 in LOVO cells using ab107225 (green). Actin fillaments have been labeled with Alexa Fluor-555 phalloidin (red).



Flow Cytometry - Anti-KMT1E / SETDB1 antibody [5H6A12] (ab107225)

Overlay histogram showing Ramos cells stained with ab107225 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab107225, 1/100 dilution) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (**ab91353**, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in Ramos cells fixed with 4% paraformaldehyde (10

min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

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

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