abcam

Product datasheet

Anti-SATB1 antibody [EPR3951] ab109122

敲除验证 重组 RabMAb

★★★★★ 2 Abreviews 20 References 10 图像

概述

产品名称	Anti-SATB1抗体[EPR3951]
描述	兔单克隆抗体[EPR3951] to SATB1
宿主	Rabbit
经测试应用	**适用于:** IP, ICC/IF, WB, IHC-P, Flow Cyt
种属反应性	**与反应:** Mouse, Rat, Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
阳性对照	WB: HAP1, Jurkat and THP1 whole cell lysate.
常规说明	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**.

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
存储溶液	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
纯度	Protein A purified
克隆	单克隆
克隆编号	EPR3951
同种型	IgG

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab109122于以下的经测试应用**

"应用说明"部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
IP		1/20.
ICC/IF		1/50.
WB		1/1000. Predicted molecular weight: 86 kDa.
IHC-P	★★★★★ (1)	1/500. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. heat up to 98 degrees C, below boiling, and then let cool for 10-20 min.
Flow Cyt		1/20.

靶标

功能 Crucial silencing factor contributing to the initiation of X inactivation mediated by Xist RNA that occurs during embryogenesis and in lymphoma (By similarity). Binds to DNA at special AT-rich sequences, the consensus SATB1-binding sequence (CSBS), at nuclear matrix- or scaffold-associated regions. Thought to recognize the sugar-phosphate structure of double-stranded DNA. Transcriptional repressor controlling nuclear and viral gene expression in a phosphorylated and acetylated status-dependent manner, by binding to matrix attachment regions (MARs) of DNA and inducing a local chromatin-loop remodeling. Acts as a docking site for several chromatin remodeling enzymes (e.g. PML at the MHC-I locus) and also by recruiting corepressors (HDACs) or coactivators (HATs) directly to promoters and enhancers. Modulates genes that are essential in the maturation of the immune T-cell CD8SP from thymocytes. Required for the switching of fetal globin species, and beta- and gamma-globin genes regulation during erythroid differentiation. Plays a role in chromatin organization and nuclear architecture during apoptosis. Interacts with the unique region (UR) of cytomegalovirus (CMV). Alu-like motifs and SATB1-binding sites provide a unique chromatin context which seems preferentially targeted by the HIV-1 integration machinery. Moreover, HIV-1 Tat may overcome SATB1-mediated repression of IL2 and IL2RA (interleukin) in T-cells by binding to the same domain than HDAC1. Delineates specific epigenetic modifications at target gene loci, directly upregulating metastasis-associated genes while downregulating tumor-suppressor genes. Reprograms chromatin organization and the transcription profiles of breast tumors to promote growth and metastasis.

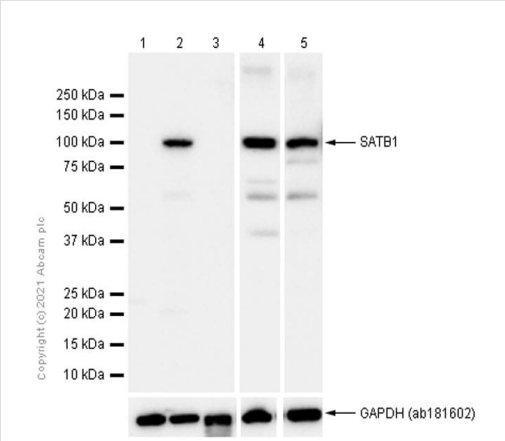
组织特异性 Expressed predominantly in thymus.

序列相似性 Belongs to the CUT homeobox family.
Contains 2 CUT DNA-binding domains.
Contains 1 homeobox DNA-binding domain.

翻译后修饰 Sumoylated. Sumoylation promotes cleavage by caspases.
Phosphorylated by PKC. Acetylated by PCAF. Phosphorylated form interacts with HDAC1, but unphosphorylated form interacts with PCAF. DNA binding properties are activated by phosphorylation and inactivated by acetylation. In opposition, gene expression is down-regulated by phosphorylation but up-regulated by acetylation.

	Cleaved at Asp-254 by caspase-3 and caspase-6 during T-cell apoptosis in thymus and during B-cell stimulation. The cleaved forms can not dimerize and lose transcription regulation function because of impaired DNA and chromatin association.
细胞定位	Nucleus matrix. Nucleus > PML body. Organized into a cage-like network anchoring loops of heterochromatin and tethering specialized DNA sequences. When sumoylated, localized in promyelocytic leukemia nuclear bodies.
形式	There are 2 isoforms produced by alternative splicing.

图片



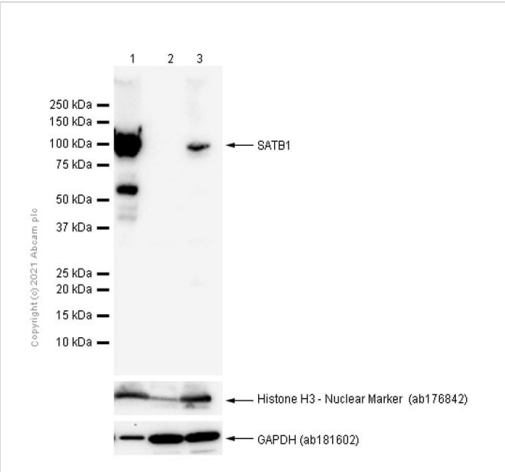
Western blot - Anti-SATB1 antibody [EPR3951] (ab109122)

All lanes : Anti-SATB1 antibody [EPR3951] (ab109122) at 1/1000 dilution (Purified)

Lane 1 : LNCaP (Human prostate carcinoma epithelial cell) whole cell lysate
Lane 2 : THP-1 (Human monocytic leukemia monocyte) whole cell lysate
Lane 3 : Mouse liver lysate
Lane 4 : Mouse thymus lysate
Lane 5 : Rat thymus lysate

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

Predicted band size: 86 kDa



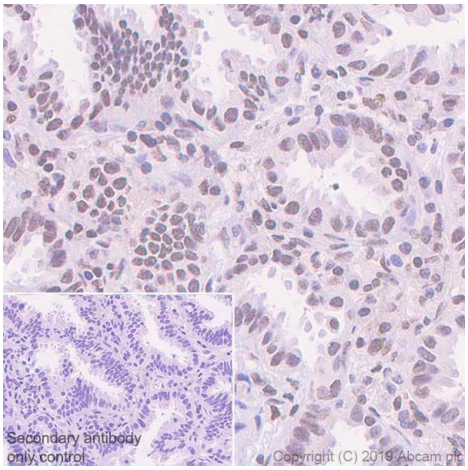
Western blot - Anti-SATB1 antibody [EPR3951] (ab109122)

All lanes : Anti-SATB1 antibody [EPR3951] (ab109122) at 1/1000 dilution (Purified)

Lane 1 : Jurkat (Human T cell leukemia T lymphocyte) nuclear extract lysate
Lane 2 : Jurkat (Human T cell leukemia T lymphocyte) without nuclear extract lysate
Lane 3 : Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate

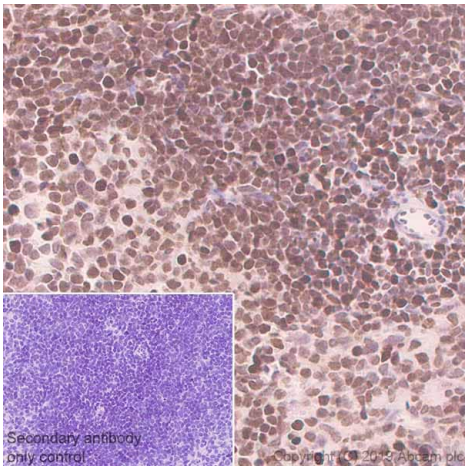
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 86 kDa



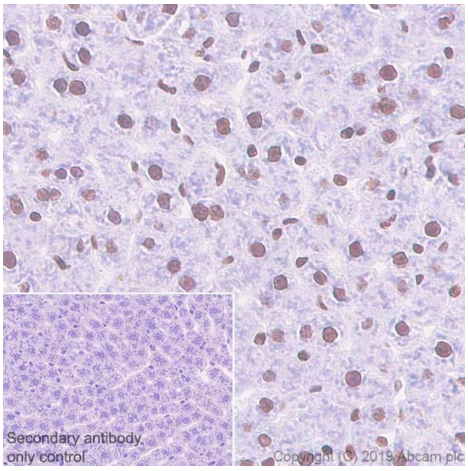
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SATB1 antibody [EPR3951] (ab109122)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human lung carcinoma tissue sections labeling SATB1 with Purified ab109122 at 1:500 dilution (0.246 µg/ml). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) . Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.



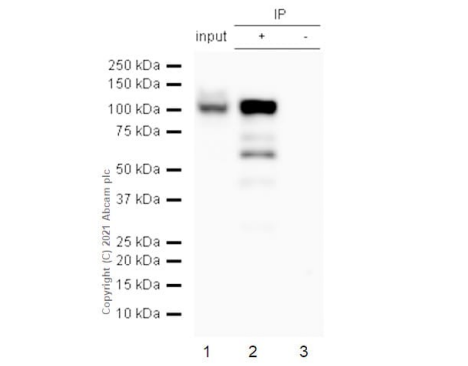
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SATB1 antibody [EPR3951] (ab109122)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse liver tissue sections labeling SATB1 with Purified ab109122 at 1:500 dilution (0.246 µg/ml). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) . Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.



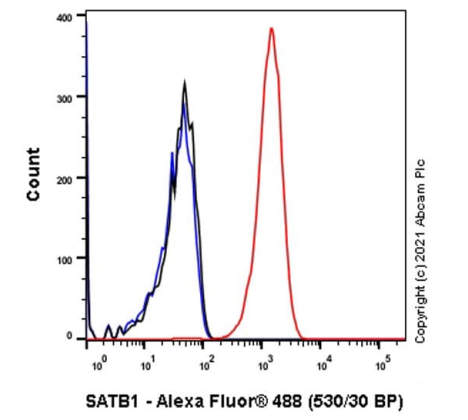
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SATB1 antibody [EPR3951] (ab109122)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat liver tissue sections labeling SATB1 with Purified ab109122 at 1:500 dilution (0.246 µg/ml). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) . Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) secondary antibody was used at 1:0 dilution. PBS instead of the primary antibody was used as the negative control.



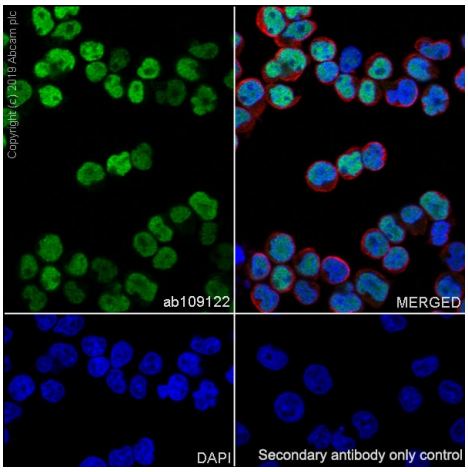
Immunoprecipitation - Anti-SATB1 antibody [EPR3951] (ab109122)

Purified ab109122 at 1:20 dilution (0.6µg) immunoprecipitating SATB1 in Rat thymus lysate.
Lane 1 (input): Rat thymus lysate 10 µg
Lane 2 (+): ab109122 + Rat thymus lysate.
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab109122 in Rat thymus lysate.
VeriBlot for IP Detection Reagent (HRP)(**ab131366**) (1:5000 dilution) was used for Western blotting.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Observed band size: kDa



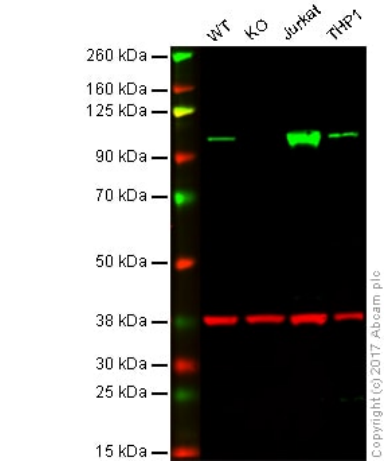
Flow Cytometry - Anti-SATB1 antibody [EPR3951] (ab109122)

Flow Cytometry analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labelling SATB1 with Purified ab109122 at 1:20 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). Unlabelled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunocytochemistry/ Immunofluorescence - Anti-SATB1 antibody [EPR3951] (ab109122)

Immunocytochemistry analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labeling SATB1 with Purified ab109122 at 1:50 dilution (2.5 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). 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.



Western blot - Anti-SATB1 antibody [EPR3951] (ab109122)

Lane 1: Wild-type HAP1 whole cell lysate (20 µg)
Lane 2: SATB1 knockout HAP1 whole cell lysate (20 µg)
Lane 3: Jurkat whole cell lysate (20 µg)
Lane 4: THP1 whole cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab109122 observed at 100 kDa. Red - loading control, **ab9484**, observed at 37 kDa.

ab109122 was shown to specifically react with SATB1 in wild-type HAP1 cells as signal was lost in SATB1 knockout cells. Wild-type and SATB1 knockout samples were subjected to SDS-PAGE. Ab109122 and **ab9484** (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.

Anti-SATB1 antibody [EPR3951] (ab109122)

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