


Product datasheet

Anti-SATB1 antibody [SP280] - C-terminal ab227685

Recombinant **RabMAb**

[4 Images](#)

Overview

Product name	Anti-SATB1 antibody [SP280] - C-terminal
Description	Rabbit monoclonal [SP280] to SATB1 - C-terminal
Host species	Rabbit
Tested applications	Suitable for: IHC-P, Flow Cyt (Intra)
Species reactivity	Reacts with: Human Predicted to work with: Mouse 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: Human thymus and lymph node tissues. Flow Cyt (Intra): PC-3 cells.
General notes	This product is FOR RESEARCH USE ONLY. For commercial use, please contact partnerships@abcam.com.

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: 7.60 Preservative: 0.1% Sodium azide Constituents: PBS, 1% BSA
Purity	Protein A/G purified
Purification notes	Purified from TCS by protein A/G.
Clonality	Monoclonal
Clone number	SP280
Isotype	IgG

Applications

The **Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab227685 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
IHC-P		1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
Flow Cyt (Intra)		1/400.

Target

Function

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.

Tissue specificity

Expressed predominantly in thymus.

Sequence similarities

Belongs to the CUT homeobox family.
Contains 2 CUT DNA-binding domains.
Contains 1 homeobox DNA-binding domain.

Post-translational modifications

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.

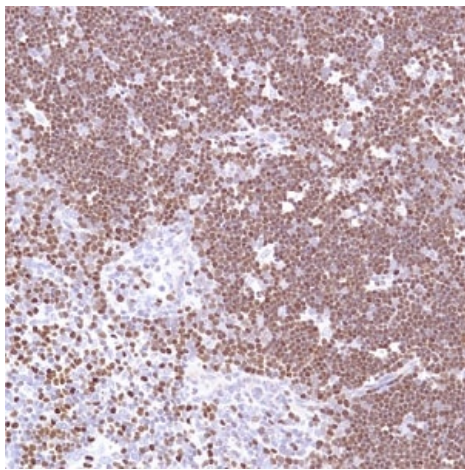
Cellular localization

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.

Form

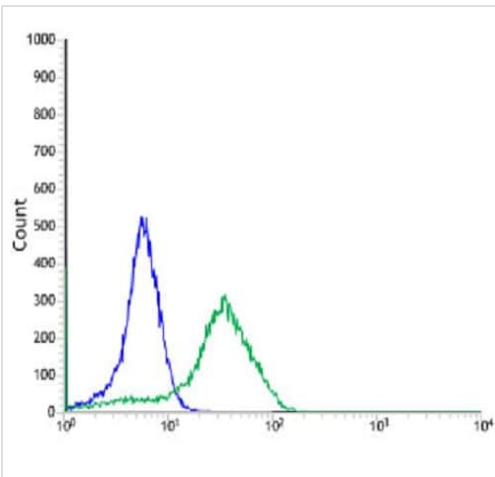
There are 2 isoforms produced by alternative splicing.

Images



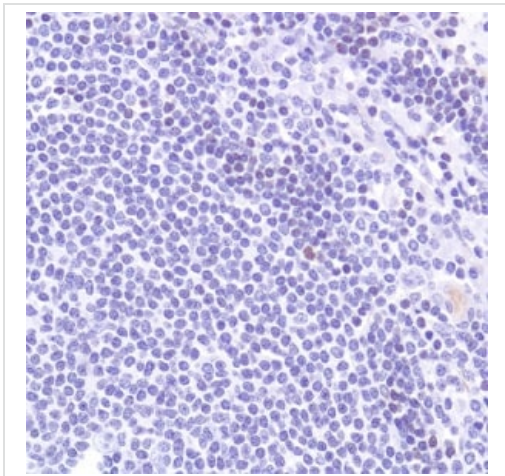
Formalin-fixed, paraffin-embedded human thymus tissue stained for SATB1 using ab227685 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SATB1 antibody [SP280] - C-terminal (ab227685)



Flow Cytometry analysis of PC-3 (human prostate adenocarcinoma cell line) cells, labeling SATB1 with ab227685 at 1/400 dilution (green) compared to a Rabbit IgG negative control (blue).

Flow Cytometry (Intracellular) - Anti-SATB1 antibody [SP280] - C-terminal (ab227685)



Formalin-fixed, paraffin-embedded human lymph node tissue stained for SATB1 using ab227685 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SATB1 antibody [SP280]
- C-terminal (ab227685)

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-SATB1 antibody [SP280] - C-terminal (ab227685)

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

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