

Product datasheet

Anti-SATB1 antibody ab70004

[14 References](#) [3 Images](#)

Overview

Product name	Anti-SATB1 antibody
Description	Rabbit polyclonal to SATB1
Host species	Rabbit
Tested applications	Suitable for: WB, ICC/IF, IHC-P
Species reactivity	Reacts with: Human
Immunogen	18 amino acid peptide near the amino terminus of the human SATB1 (GenBank accession no. Q01826).
General notes	<p>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.</p> <p>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</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C.
Storage buffer	pH: 7.2 Preservative: 0.02% Sodium azide Constituent: PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab70004 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
WB		Use a concentration of 1 - 2 µg/ml. Detects a band of approximately 100, 110 kDa (predicted molecular weight: 85 kDa).
ICC/IF		Use a concentration of 20 µg/ml.
IHC-P		Use a concentration of 2.5 µg/ml.

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

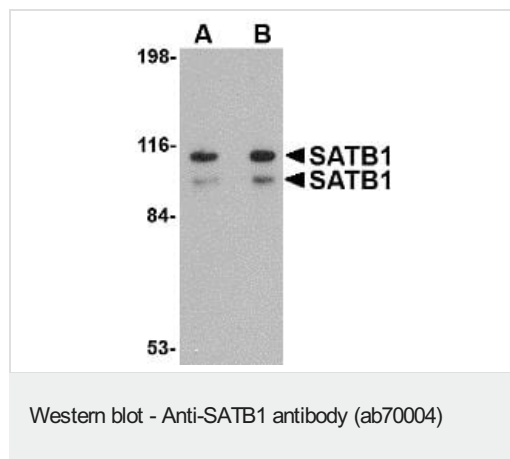
Sumoylated. Sumoylation promotes cleavage by caspases.
Phosphorylated by PKC. Acetylated by PCAF. Phosphorylated form interacts with HDAC1, but unphosphorylated form interacts with PCAF. DNA binding properties are activated by phosphorylation and inactivated by acetylation. In opposition, gene expression 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.



Lane 1 : Anti-SATB1 antibody (ab70004) at 1 µg/ml

Lane 2 : Anti-SATB1 antibody (ab70004) at 2 µg/ml

All lanes : SK-N-SH cell lysate

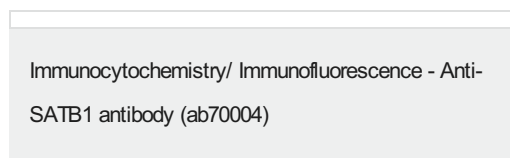
Lysates/proteins at 15 µg per lane.

Predicted band size: 85 kDa

Additional bands at: 100 kDa (possible isoform), 110 kDa (possible isoform)



ab70004 at 2.5µg/ml staining SATB1 in human brain tissue section by immunohistochemistry (Formalin/ PFA fixed paraffin-embedded tissue sections).



Immunofluorescence of SATB1 in Human Brain cells using ab70004 at 20 ug/ml.

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

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