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# Anti-SATB1 Rabbit Monoclonal Antibody

**Catalog # ABO13583**

## Specification

### Anti-SATB1 Rabbit Monoclonal Antibody - Product Information

| | |
|---|---|
| Application | **WB, IHC, IF, ICC, IP, FC** |
| Primary Accession | Q01826 |
| Host | **Rabbit** |
| Isotype | **Rabbit IgG** |
| Reactivity | **Rat, Human, Mouse** |
| Clonality | **Monoclonal** |
| Format | **Liquid** |

**Description**
Anti-SATB1 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

### Anti-SATB1 Rabbit Monoclonal Antibody - Additional Information

**Gene ID** 6304

**Other Names**
DNA-binding protein SATB1, Special AT-rich sequence-binding protein 1, SATB1 (<a href="http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=10541" target="_blank">HGNC:10541</a>)

**Calculated MW**
85957 MW KDa

**Application Details**
WB 1:500-1:3000<br>IHC 1:50-1:200<br>ICC/IF 1:100-1:500<br>IP 1:50-1:100<br>FC 1:200-1:500

**Subcellular 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 (PML NBs).

**Tissue Specificity**
Expressed predominantly in thymus..

**Contents**
Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

**Immunogen**
A synthesized peptide derived from human SATB1

**Purification**
Affinity-chromatography

| | |
|---|---|
| Storage | **Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.** |

## Anti-SATB1 Rabbit Monoclonal Antibody - Protein Information

**Name** SATB1 (HGNC:10541)

**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 up-regulating metastasis- associated genes while down-regulating tumor-suppressor genes. Reprograms chromatin organization and the transcription profiles of breast tumors to promote growth and metastasis. Promotes neuronal differentiation of neural stem/progenitor cells in the adult subventricular zone, possibly by positively regulating the expression of NEUROD1 (By similarity).

**Cellular Location**
Nucleus matrix. Nucleus, PML body. Note=Organized into a cage-like network anchoring loops of heterochromatin and tethering specialized DNA sequences (PubMed:12692553). When sumoylated, localized in promyelocytic leukemia nuclear bodies (PML NBs) (PubMed:18408014)

**Tissue Location**
Expressed predominantly in thymus.

## Anti-SATB1 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## Anti-SATB1 Rabbit Monoclonal Antibody - Images

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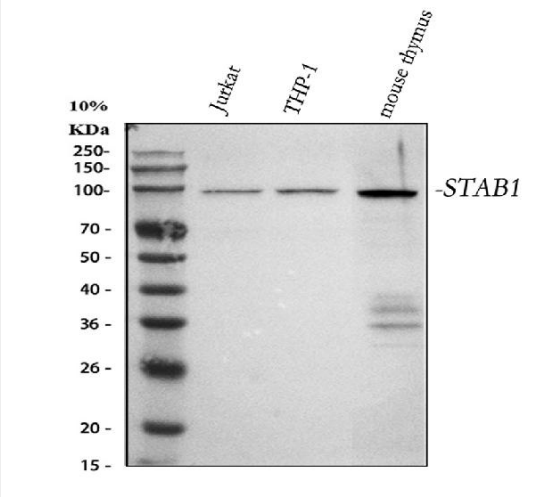


Figure 1. Western blot analysis of STAB1 using anti-STAB1 antibody (M01312).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Jurkat whole cell lysates,
Lane 2: human THP-1 whole cell lysates,
Lane 3: mouse thymus tissue lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-STAB1 antigen affinity purified monoclonal antibody (Catalog # M01312) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:500 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for STAB1 at approximately 100 kDa. The expected band size for STAB1 is at 86 kDa.

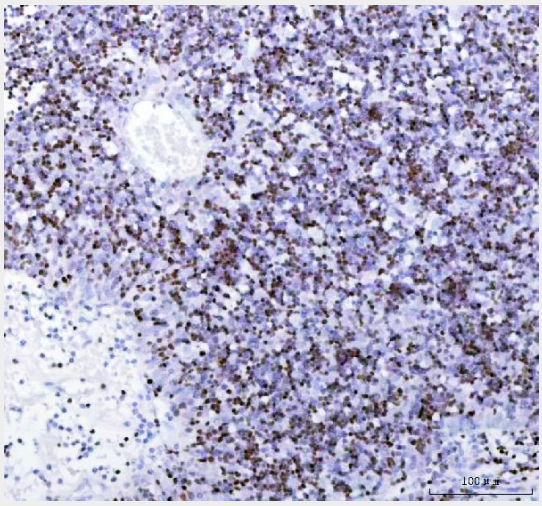

Figure 2. IHC analysis of STAB1 using anti-STAB1 antibody (M01312).
STAB1 was detected in a paraffin-embedded section of human spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:50 rabbit anti-STAB1 Antibody (M01312) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was

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developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

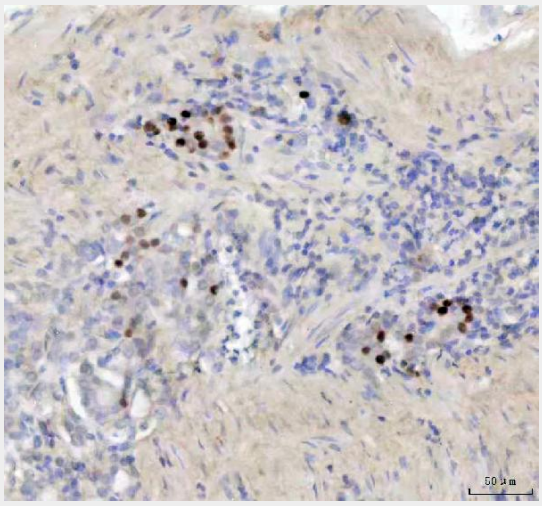

Figure 3. IHC analysis of STAB1 using anti-STAB1 antibody (M01312).
STAB1 was detected in a paraffin-embedded section of human prostatic acinar adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:50 rabbit anti-STAB1 Antibody (M01312) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.