

SATB1 Antibody (internal region)
Peptide-affinity purified goat antibody
Catalog # AF2973a**Specification**

SATB1 Antibody (internal region) - Product Information

| | |
|-------------------|---|
| Application | WB, IHC |
| Primary Accession | Q01826 |
| Other Accession | NP_002962.1 , 6304 , 20230 (mouse) , 316164 (rat) |
| Reactivity | Human |
| Predicted | Mouse, Rat, Cow |
| Host | Goat |
| Clonality | Polyclonal |
| Concentration | 0.5 mg/ml |
| Isotype | IgG |
| Calculated MW | 85957 |

SATB1 Antibody (internal region) - Additional Information**Gene ID** 6304**Other Names**

DNA-binding protein SATB1, Special AT-rich sequence-binding protein 1, SATB1

Format

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

SATB1 Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

SATB1 Antibody (internal region) - 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.

SATB1 Antibody (internal region) - Protocols

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

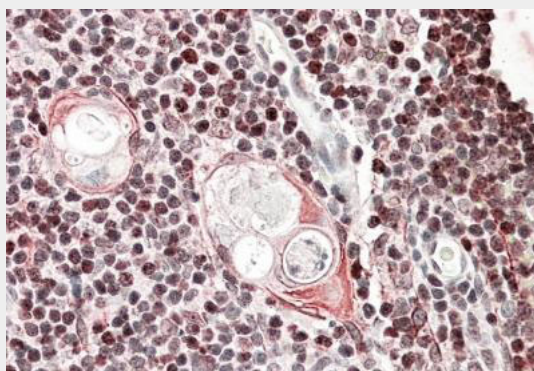
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SATB1 Antibody (internal region) - Images





AF2973a (0.3 µg/ml) staining of MOLT4 lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



AF2973a (3.8 µg/ml) staining of paraffin embedded Human Thymus. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

SATB1 Antibody (internal region) - Background

Reported variants NP_001124482.1 and NP_002962.1 represent identical protein.

SATB1 Antibody (internal region) - References

SUMO conjugation to the matrix attachment region-binding protein, special AT-rich sequence-binding protein-1 (SATB1), targets SATB1 to promyelocytic nuclear bodies where it undergoes caspase cleavage. Tan JA, Sun Y, Song J, Chen Y, Krontiris TG, Durrin LK. The Journal of biological chemistry 2008 Jun 283 (26): 18124-34. PMID: 18408014