

# SATB1 (H-70): sc-28676

## BACKGROUND

The homeoproteins CCAAT displacement protein (CDP) and special AT-rich sequence binding protein 1 (SATB1) are transcriptional repressors of many cellular genes, and they participate in cell development and cell type differentiation. SATB1 is expressed primarily in thymocytes, and, like CDP, it also contains a distinct homeobox DNA-binding domain that is essential for DNA binding. SATB1 and CDP interact through these homeodomains and synergistically function as mediators of gene expression. SATB1 contains an additional domain that has a higher affinity for DNA and specifically facilitates the direct association between SATB1 and the nuclear matrix attachment regions (MARs) of DNA. MARs are specific DNA sequences that bind to the nuclear matrix and form the base of chromosomal loops that organize the chromosomes and regulate DNA transcription and replication within the nucleus. The association of SATB1 with the core unwinding element within the base-unpairing region of MARs requires both the MAR and homeobox binding domains of SATB1.

## CHROMOSOMAL LOCATION

Genetic locus: SATB1 (human) mapping to 3p24.3; Satb1 (mouse) mapping to 17 C.

## SOURCE

SATB1 (H-70) is a rabbit polyclonal antibody raised against amino acids 241-310 mapping within an internal region of SATB1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-28676 X, 200 µg/0.1 ml.

## APPLICATIONS

SATB1 (H-70) is recommended for detection of SATB1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). SATB1 (H-70) is also recommended for detection of SATB1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SATB1 siRNA (h): sc-36460, SATB1 siRNA (m): sc-36461, SATB1 shRNA Plasmid (h): sc-36460-SH, SATB1 shRNA Plasmid (m): sc-36461-SH, SATB1 shRNA (h) Lentiviral Particles: sc-36460-V and SATB1 shRNA (m) Lentiviral Particles: sc-36461-V.

SATB1 (H-70) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of SATB1 isoforms: 86/89 kDa.

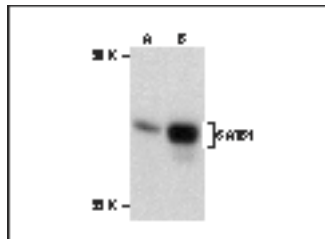
Molecular Weight (observed) of SATB1: 115 kDa.

Positive Controls: SATB1 (h2): 293T Lysate: sc-172050, mouse thymus extract: sc-2406 or C32 nuclear extract: sc-2136.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



SATB1 (H-70): sc-28676. Western blot analysis of SATB1 expression in cell lysates from HeLa cells transfected with human SATB1 construct: sc-172050 (0.5 µg/ml) and control vector.

## SELECT PRODUCT CITATIONS

- Steidl, U., et al. 2007. A distal single nucleotide polymorphism alters long-range regulation of the PU.1 gene in acute myeloid leukemia. *J. Clin. Invest.* 117: 2611-2620.
- Sun, Z., et al. 2015. Special AT-rich sequence-binding protein-1 participates in the maintenance of breast cancer stem cells through regulation of the Notch signaling pathway and expression of Snail1 and Twist1. *Mol. Med. Rep.* 11: 3235-3542.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **SATB1 (C-6): sc-376096**, our highly recommended monoclonal alternative to SATB1 (H-70).