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### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# SATB1 (m): 293T Lysate: sc-123361

## 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.

## REFERENCES

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- Li, K., et al. 2007. SATB1 regulates SPARC expression in K-562 cell line through binding to a specific sequence in the third intron. *Biochem. Biophys. Res. Commun.* 356: 6-12.
- Kumar, P.P., et al. 2007. SATB1-binding sequences and Alu-like motifs define a unique chromatin context in the vicinity of HIV-1 integration sites. *J. Virol.* 81: 5617-5627.

## CHROMOSOMAL LOCATION

Genetic locus: Satb1 (mouse) mapping to 17 C.

## PRODUCT

SATB1 (m): 293T Lysate represents a lysate of mouse SATB1 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## APPLICATIONS

SATB1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive SATB1 antibodies. Recommended use: 10-20  $\mu$ l per lane.

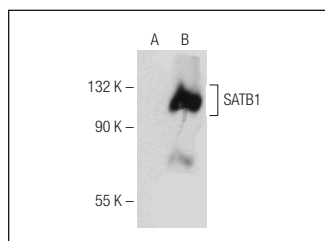
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

SATB1 (C-6): sc-376096 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse SATB1 expression in SATB1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



SATB1 (C-6): sc-376096. Western blot analysis of SATB1 expression in non-transfected: sc-117752 (A) and mouse SATB1 transfected: sc-123361 (B) 293T whole cell lysates.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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) for detailed protocols and support products.