SANTA CRUZ BIOTECHNOLOGY, INC.

SATB2 (SATBA4B10): sc-81376



BACKGROUND

SATB2 (special AT-rich sequence-binding protein 2) is a nuclear matrix protein that influences craniofacial formation mechanisms, such as jaw and palate development, and is part of a transcriptional network regulating skeletal development and osteoblast differentiation. Highly expressed in adult and fetal brain, SATB2 contains two CUT DNA-binding domains and one homeobox domain and is closely related to SATB1, a transcriptional repressor. SATB2 is thought to bind to matrix attachment regions (MARs) and regulate MAR-dependent transcription of various genes, including HoxA2 and ATF-4 (CREB-2), involved in skeletal development. Functioning as both a transcriptional activator and repressor, SATB2 can also act as a protein scaffold that can enhance the activity of other DNA-binding proteins. Defects in the gene encoding SATB2 are the cause of cleft palate manifested in conjunction with severe mental retardation.

CHROMOSOMAL LOCATION

Genetic locus: SATB2 (human) mapping to 2q33.1; Satb2 (mouse) mapping to 1 C1.3.

SOURCE

SATB2 (SATBA4B10) is a mouse monoclonal antibody raised against a recombinant protein corresponding to the C-terminal region of SATB2 of human origin.

PRODUCT

Each vial contains 100 $\mu g\, lg G_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

APPLICATIONS

SATB2 (SATBA4B10) is recommended for detection of SATB2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for SATB2 siRNA (h): sc-76456, SATB2 siRNA (m): sc-76457, SATB2 siRNA (r): sc-61891, SATB2 shRNA Plasmid (h): sc-76456-SH, SATB2 shRNA Plasmid (m): sc-76457-SH, SATB2 shRNA Plasmid (r): sc-61891-SH, SATB2 shRNA (h) Lentiviral Particles: sc-76456-V, SATB2 shRNA (m) Lentiviral Particles: sc-76457-V and SATB2 shRNA (r) Lentiviral Particles: sc-61891-V.

Molecular Weight of SATB2: 105 kDa.

Positive Controls: KNRK nuclear extract: sc-2141, NIH/3T3 whole cell lysate: sc-2210 or C6 whole cell lysate: sc-364373.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/ thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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

DATA





SATB2 (SATBA4B10): sc-81376. Western blot analysis of SATB2 expression in SH-SYSY nuclear extract (A), NIH/3T3 (B) and C6 (C) whole cell lysates and mouse brain (D) and rat brain (E) tissue extracts.

SATB2 (SATBA4B10): sc-81376. Western blot analysis of SATB2 expression in KNRK (**A**), HT-1080 (**B**) and SH-SY5Y (**C**) nuclear extracts.

SELECT PRODUCT CITATIONS

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- 6. Tao, W., et al. 2020. SATB2 drives glioblastoma growth by recruiting CBP to promote FOXM1 expression in glioma stem cells. EMBO Mol. Med. 12: e12291.
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- Li, F., et al. 2024. Transcription factor SATB2 regulates skeletal muscle cell proliferation and migration via HDAC4 in pigs. Genes 15: 65.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.