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 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% BSA.

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.

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 µg per 100-500 µg 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 shRNA Plasmid (h): sc-76456-SH, SATB2 shRNA Plasmid (m): sc-76456-SH, SATB2 shRNA (h) Lentiviral Particles: sc-76456-V and SATB2 shRNA (m) Lentiviral Particles: sc-76457-V.

Molecular Weight of SATB2: 105 kDa.

Positive Controls: KNRK nuclear extract: sc-2141, HT-1080 whole cell lysate: sc-364183 or SH-SY5Y cell lysate: sc-3812.

RECOMMENDED SECONDARY REAGENTS
To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA

SELECT PRODUCT CITATIONS

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