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Rabbit Anti-SATB2 antibody

SL11949R

Product Name:	SATB2
Chinese Name:	DNABinding protein2抗体
Alias:	DNA binding protein SATB2; DNA-binding protein SATB2; FLJ21474; FLJ32076; KIAA1034; MGC119474; MGC119477; SATB family member 2; SATB homeobox 2; SATB2; SATB2_HUMAN; Special AT rich sequence binding protein 2; Special AT-rich sequence-binding protein 2.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Cow,Horse,Sheep,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=1ug/testICC=1:100-500IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	83kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human SATB2:451-485/733
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	SATB2 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 ATF4 (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. **Function:** Binds to DNA, at nuclear matrix- or scaffold-associated regions. Thought to recognize the sugar-phosphate structure of double-stranded DNA. Transcription factor controlling nuclear gene expression, 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 and also by recruiting corepressors (HDACs) or coactivators (HATs) directly to promoters and enhancers. Required for the initiation of the upper-layer neurons (UL1) specific genetic program and for the inactivation of deep-layer neurons (DL) and UL2 specific genes, probably by modulating BCL11B expression. Repressor of Ctip2 and regulatory determinant of corticocortical connections in the developing cerebral cortex. May play an important role in palate formation. Acts as a molecular node in a transcriptional network regulating skeletal development and osteoblast differentiation. **Subunit:** Interacts with ATF4 and RUNX2; resulting in enhanced DNA binding and transactivation by these transcription factors (By similarity). Interacts with PIAS1. **Subcellular Location:** Nucleus matrix. **Tissue Specificity:** High expression in adult brain, moderate expression in fetal brain, and weak expression in adult liver, kidney, and spinal cord and in select brain regions, including amygdala, corpus callosum, caudate nucleus, and hippocampus. **Post-translational modifications:** Sumoylated by PIAS1. Sumoylation promotes nuclear localization, but represses transcription factor activity. **DISEASE:** Note=Chromosomal aberrations involving SATB2 are found in isolated cleft palate. Translocation t(2;7); translocation t(2;11). Defects in SATB2 are a cause of cleft palate isolated (CPI) [MIM:119540]. A congenital fissure of the soft and/or hard palate, due to faulty fusion. Isolated cleft palate is not associated with cleft lips. Some patients may manifest other craniofacial dysmorphic features, mental retardation, and osteoporosis. Note=A chromosomal aberration involving SATB2 is found in a patient with classical features of Toriello-Carey syndrome. Translocation t(2;14)(q33;q22).

Similarity:
Belongs to the CUT homeobox family.
Contains 2 CUT DNA-binding domains.
Contains 1 homeobox DNA-binding domain.

SWISS:
Q9UPW6

Gene ID:
23314

Database links:

Entrez Gene: 23314Human

Entrez Gene: 212712Mouse

Entrez Gene: 501145Rat

Omim: 608148Human

SwissProt: Q3ZB87Human

SwissProt: Q4V763Human

SwissProt: Q9UPW6Human

SwissProt: Q546B3Mouse

SwissProt: Q8VI24Mouse

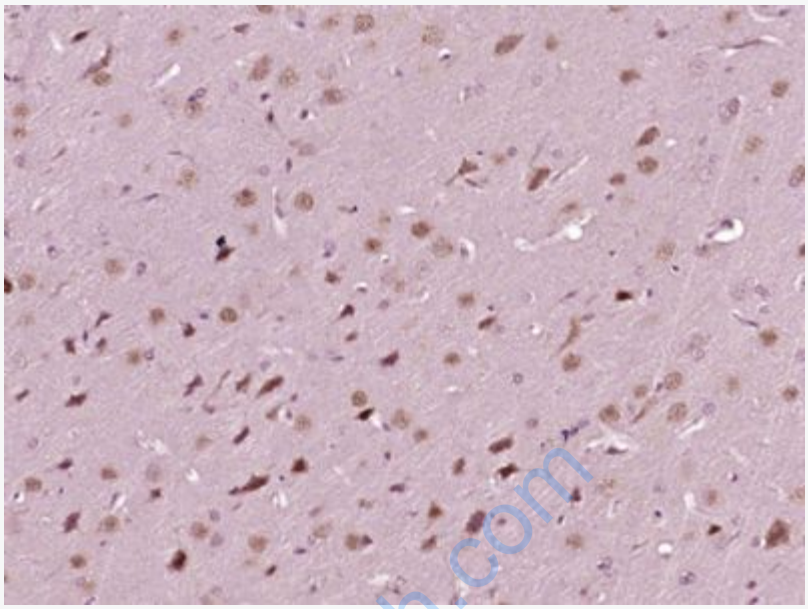
SwissProt: D3ZJ19Rat

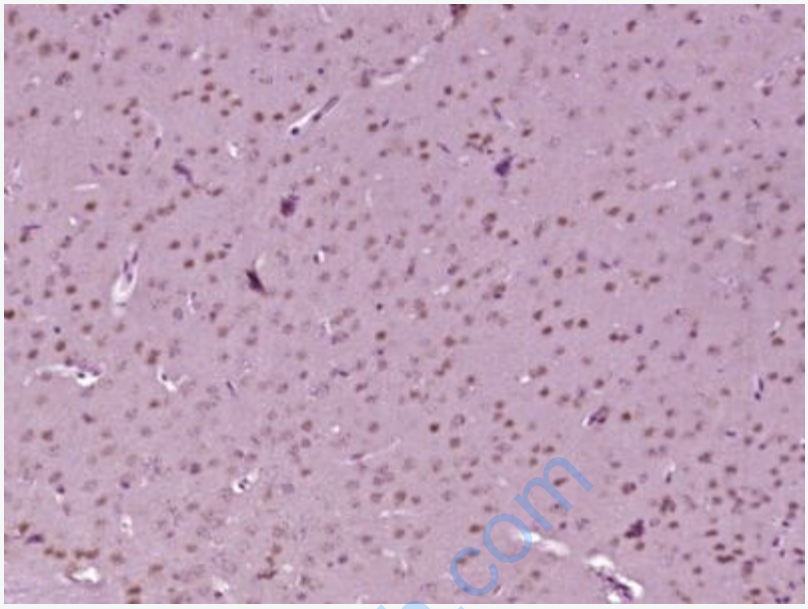
Unigene: 516617Human

Unigene: 145599Mouse

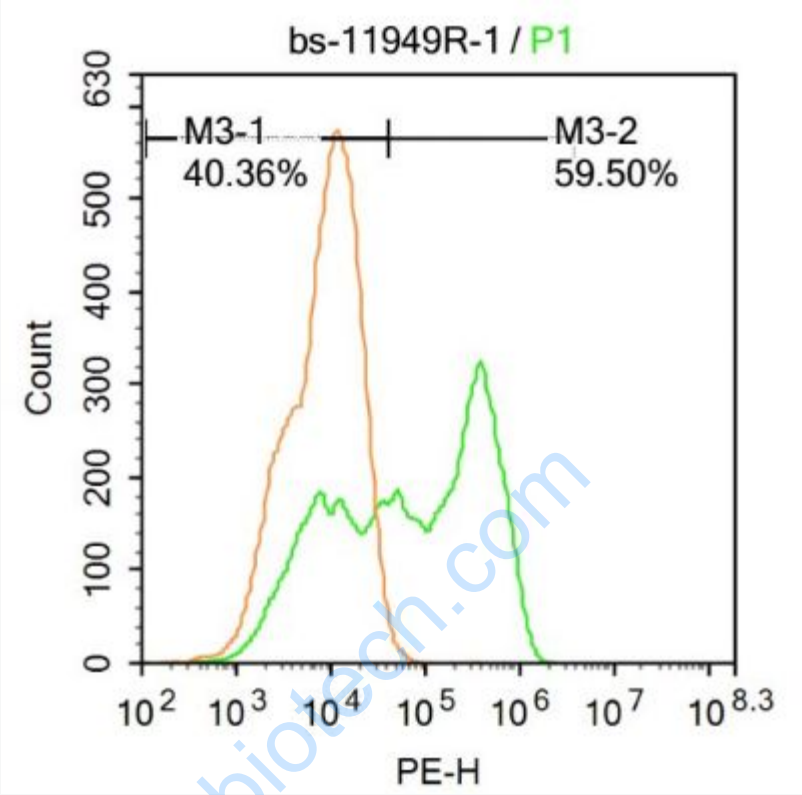
Unigene: 216103Rat

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:	 Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (SATB2) Polyclonal Antibody, Unconjugated (SL11949R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (SATB2) Polyclonal Antibody, Unconjugated (SL11949R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



U-937 cells were fixed with 4% PFA for 10min at room temperature,permeabilized with 90% ice-cold methanol for 20 min at room temperature,and incubated in 5% BSA blocking buffer for 30 min at room temperature. Cells were then stained with SATB2 Antibody(SL11949R) at 1:100 dilution in blocking buffer and incubated for 30 min at room temperature, washed twice with 2%BSA in PBS, followed by secondary antibody incubation for 40 min at room temperature. Acquisitions of 20,000 events were performed.Cells stained with primary antibody (green), and isotype control (orange).