abcam

Product datasheet

Anti-SATB2 antibody [EPNCIR130A] ab92446

KO 評価済 リコンビナント RabMAb

8 Abreviews 55 References 画像数 11

製品の概要

製品名	Anti-SATB2 antibody [EPNCIR130A]
製品の詳細	Rabbit monoclonal [EPNCIR130A] to SATB2
由来種	Rabbit
アプリケーション	**適用あり:** WB, IHC-P, ICC/IF, Flow Cyt (Intra) **適用なし:** IP
種交差性	**交差種:** Mouse, Rat, Human
免疫原	Synthetic peptide within Human SATB2. The exact sequence is proprietary. Database link: **Q9UPW6**
ポジティブ・コントロール	WB: HT-1080, SW1353, MCF7 and Saos-2 cell lysates; Rat and mouse brain and human fetal brain tissue lysates; Wild-type HAP1 whole cell lysate. IHC-P: Human cerebral cortex tissue; Mouse brain tissue. ICC/IF: Saos-2 cells Flow Cyt (intra): SH-SY5Y cells. IHC-Fr: Mouse brain tissue.
特記事項	This antibody was developed as part of a collaboration between Epitomics, the National Cancer Institute's Center for Cancer Research and the lab of John Niederhuber. **View antibodies from NCI Center for Cancer Research Collaboration**. This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Stable for 12 months at -20°C.
バッファー	pH: 7.20

	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol, 0.05% BSA
精製度	Protein A purified
ポリ/モノ	モノクローナル
クローン名	EPNCIR130A
アイソタイプ	IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、次のテスト済みアプリケーションにおけるab92446の使用に適用されます**

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
WB	★★★★★ (1)	1/1000 - 1/5000. Predicted molecular weight: 81 kDa.
IHC-P		1/150 - 1/300. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See **IHC antigen retrieval protocols**.
ICC/IF	★★★★☆ (1)	1/100.
Flow Cyt (Intra)		1/1000. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

追加情報 Is unsuitable for IP.

ターゲット情報

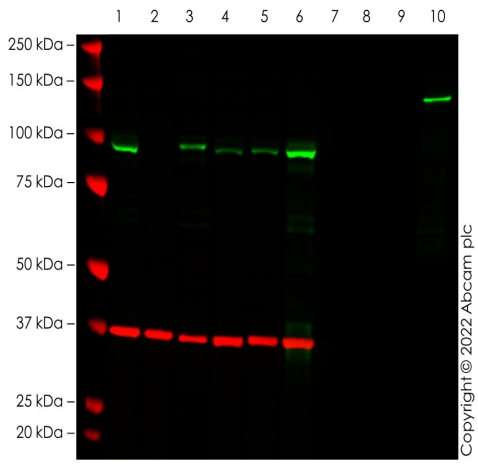
機能 Binds to DNA, at nuclear matrix- or scaffold-associated regions. Thought to recognize the sugar-phosphate structure of double-stranded DNA. Transcription factor controlling nuclear gene expression, by binding to matrix attachment regions (MARs) of DNA and inducing a local chromatin-loop remodeling. 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.

組織特異性 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.

関連疾患 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).
配列類似性	Belongs to the CUT homeobox family. Contains 2 CUT DNA-binding domains. Contains 1 homeobox DNA-binding domain.
翻訳後修飾	Sumoylated by PIAS1. Sumoylation promotes nuclear localization, but represses transcription factor activity.
細胞内局在	Nucleus matrix.

画像



Western blot - Anti-SATB2 antibody [EPNCIR130A] (ab92446)

All lanes : Anti-SATB2 antibody [EPNCIR130A] (ab92446) at 1/1000 dilution

Lane 1 : Wild-type HAP1 cell lysate at 20 µg
Lane 2 : SATB2 knockout HAP1 cell lysate at 20 µg
Lane 3 : Mouse E18 Embyonic brain cell lysate at 20 µg
Lane 4 : NIH/3T3 cell lysate at 20 µg
Lane 5 : HT1080 cell lysate at 20 µg
Lane 6 : Saos-2 cell lysate at 20 µg
Lanes 7 & 9 : Empty
Lane 8 : SATB1 Recombinant Protein cell lysate at 0.1 µg
Lane 10 : SATB2 Recombinant Protein (**ab132405**) cell lysate at 0.1 µg

Secondary
All lanes : Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution

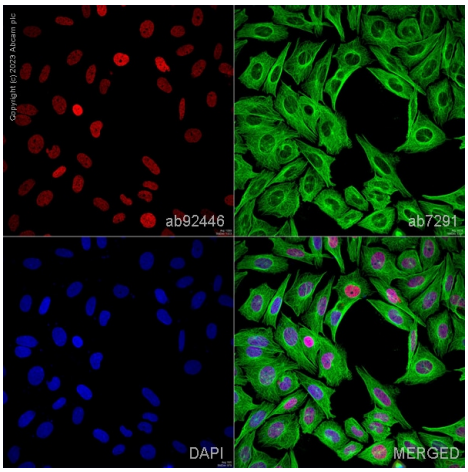
Performed under reducing conditions.

Predicted band size: 81 kDa
Observed band size: 100 kDa

False colour image of Western blot: Anti-SATB2 antibody [EPNCIR130A] staining at 1/1000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (**ab8245**) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab92446 was shown to bind specifically to SATB2. A band was observed at 100 kDa in wild-type HAP1 cell lysates with no signal observed at this

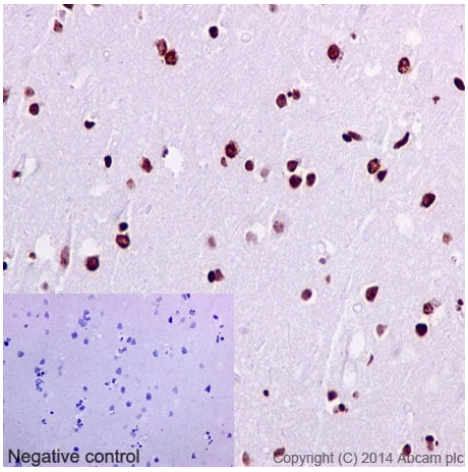
size in SATB2 knockout cell line.

To generate this image, wild-type and SATB2 knockout HAP1 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.



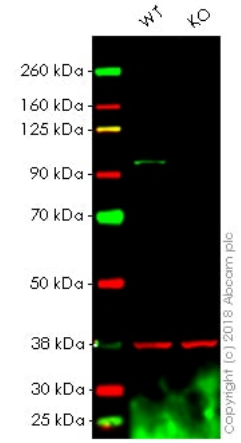
Immunocytochemistry/ Immunofluorescence - Anti-SATB2 antibody [EPNCIR130A] (ab92446)

Immunocytochemistry/Immunofluorescence analysis of Saos-2 cells (human osteosarcoma cell line) labelling SATB2 (red) with purified ab92446 at 1/100 dilution. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. **ab150083**, an Alexa Fluor® 647-conjugated goat anti-rabbit IgG H&L (1/1000), was used as the secondary antibody. Tubulin (green) was stained with **ab7291**, an anti-alpha tubulin antibody (1/1000). DAPI (blue) was used as the nuclear counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SATB2 antibody [EPNCIR130A] (ab92446)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human cerebral cortex tissue labelling SATB2 with purified ab92446 at 1/150. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A prediluted HRP-polymer conjugated anti-rabbit IgG was used as the secondary antibody. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Western blot - Anti-SATB2 antibody [EPNCIR130A] (ab92446)

All lanes : Anti-SATB2 antibody [EPNCIR130A] (ab92446) at 1/1000 dilution

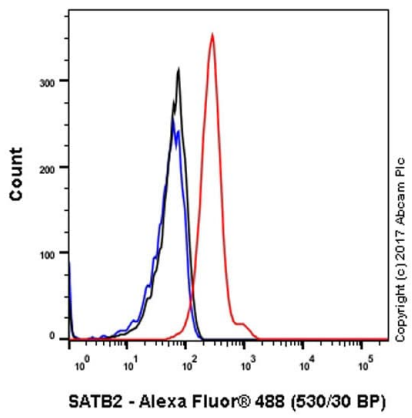
Lane 1 : Wild-type HAP1 whole cell lysate
Lane 2 : SATB2 knockout HAP1 whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 81 kDa

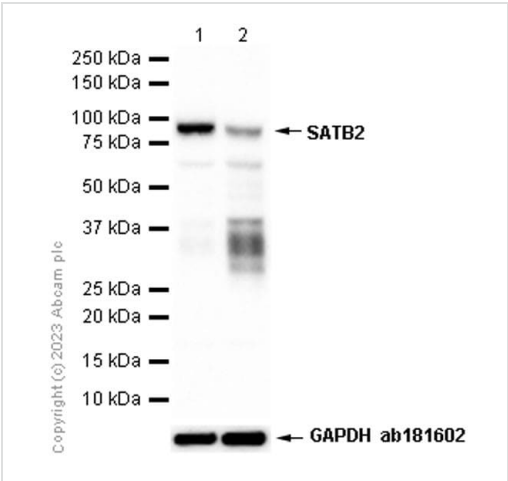
Lanes 1 - 2: Merged signal (red and green). Green - ab92446 observed at 83 kDa. Red - loading control, **ab9484**, observed at 37 kDa.

ab92446 was shown to specifically react with SATB2 in wild-type HAP1 cells as signal was lost in SATB2 knockout cells. Wild-type and SATB2 knockout samples were subjected to SDS-PAGE. Ab92446 and **ab9484** (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



Flow Cytometry (Intracellular) - Anti-SATB2 antibody [EPNCIR130A] (ab92446)

Intracellular Flow Cytometry analysis of SH-SY5Y cells (human neuroblastoma cell line from bone marrow) labeling SATB2 with purified ab92446 at 1/150 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (**ab150077**) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) (**ab172730**) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.



Western blot - Anti-SATB2 antibody [EPNCIR130A] (ab92446)

All lanes : Anti-SATB2 antibody [EPNCIR130A] (ab92446) at 1/10000 dilution

Lane 1 : Saos-2 (Human osteosarcoma epithelial) whole cell fresh lysate
Lane 2 : Saos-2 (Human osteosarcoma epithelial) whole cell lysate

Lysates/proteins at 20 µg per lane.

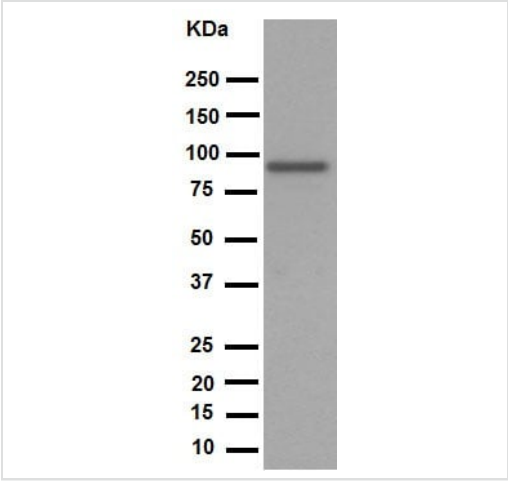
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 81 kDa
Observed band size: 83 kDa

Exposure time: 20 seconds

Blocking and diluting buffer and concentration: 5% NFDM/TBST

Freshly made lysate is highly recommended to minimize protein degradation.



Western blot - Anti-SATB2 antibody [EPNCIR130A] (ab92446)

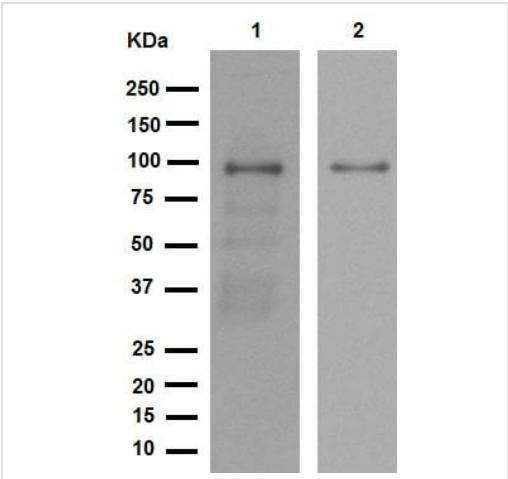
Anti-SATB2 antibody [EPNCIR130A] (ab92446) at 1/1000 dilution (purified) + SW1353 (human chondrosarcoma cell line) cell lysate at 20 µg

Secondary
Peroxidase conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 81 kDa
Observed band size: 83 kDa

Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.



Western blot - Anti-SATB2 antibody [EPNCIR130A] (ab92446)

All lanes : Anti-SATB2 antibody [EPNCIR130A] (ab92446) at 1/1000 dilution (purified)

Lane 1 : Saos-2 (human osteosarcoma cell line) cell lysate
Lane 2 : Human fetal brain tissue lysate

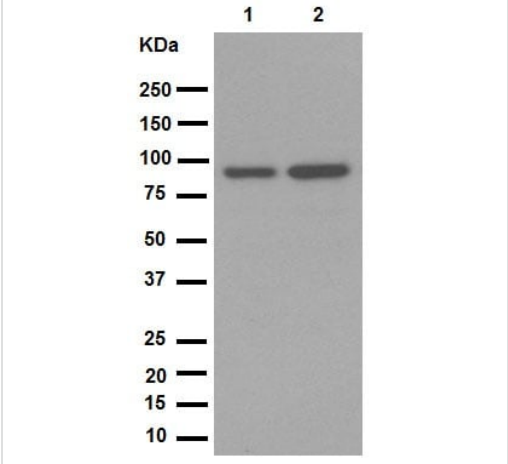
Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Peroxidase conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 81 kDa
Observed band size: 83 kDa

Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.



Western blot - Anti-SATB2 antibody [EPNCIR130A] (ab92446)

All lanes : Anti-SATB2 antibody [EPNCIR130A] (ab92446) at 1/1000 dilution (purified)

Lane 1 : Mouse brain tissue lysate
Lane 2 : Rat brain tissue lysate

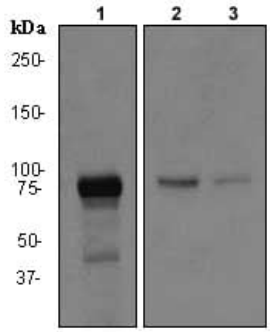
Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Peroxidase conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 81 kDa
Observed band size: 83 kDa

Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.



Western blot - Anti-SATB2 antibody [EPNCIR130A] (ab92446)

All lanes : Anti-SATB2 antibody [EPNCIR130A] (ab92446) at 1/1000 dilution (unpurified)

Lane 1 : HT1080 (human fibrosarcoma cell line) cell lysate
Lane 2 : SW1353 (human chondrosarcoma cell line) cell lysate
Lane 3 : MCF7 (human breast adenocarcinoma cell line) cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 81 kDa

Anti-SATB2 antibody [EPNCIR130A] (ab92446)

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