PRODUCT INFORMATION

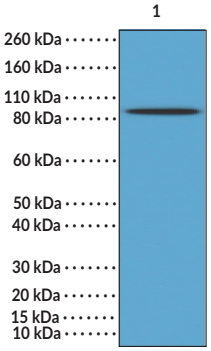
SATB2 (C-Term) Rabbit Monoclonal Antibody (Clone RM365)

Item No. 32290

Overview and Properties

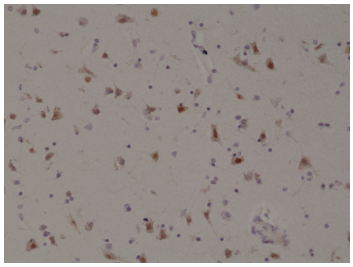
Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	Special AT-rich Sequence-Binding Protein 2
Immunogen:	Peptide from the C-terminal region of human DNA-binding protein SATB2
Cross Reactivity:	(+) SATB2
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM365
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:200-1:1,000 for IHC and 1:1,000-1:2,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images

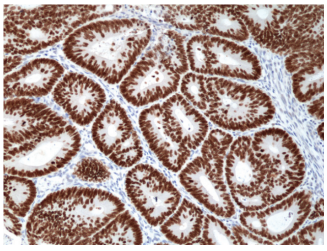


Lane 1: K562 cell lysate

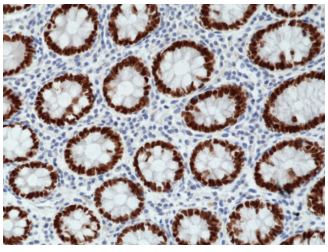
WB of K562 cell lysate using SATB2 (C-Term) Rabbit Monoclonal Antibody (Clone RM365) at dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human brain tissue using SATB2 (C-Term) Rabbit Monoclonal Antibody (Clone RM365) at a dilution of 1:200.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human colon cancer tissue using SATB2 (C-Term) Rabbit Monoclonal Antibody (Clone RM365) at a dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human colon tissue using SATB2 (C-Term) Rabbit Monoclonal Antibody (Clone RM365) at a dilution of 1:1,000.

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PRODUCT INFORMATION

Description

Special AT-rich sequence-binding protein 2 (SATB2) is a transcription factor.[1] It is composed of two CUT domains and a homeobox domain, which bind DNA matrix attachment regions (MARs) and promote chromatin remodeling.[1,2] *SATB2* is expressed in superficial cortical layers during embryonic development, where it regulates the formation of callosal projection neurons by repressing *Ctip2* expression, and by hippocampal and cortical pyramidal neurons in the adult brain, where it has roles in synaptic plasticity and neurotransmission.[2,3] It has additional functions in B cell and osteoblast differentiation.[2] SATB2 has been used as a marker for primary or metastatic colorectal cancer.[4] *SATB2* variants have been found in patients with SATB2-associated syndrome, an autosomal dominant disorder characterized by intellectual disability and craniofacial abnormalities, as well as in patients with schizophrenia.[1,5] Cayman's SATB2 (C-Term) Rabbit Monoclonal Antibody (Clone RM365) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Zarate, Y.A., Bosanko, K.A., Caffrey, A.R., *et al.* Mutation update for the SATB2 gene. *Hum. Mutat.* **40(8)**, 1013-1029 (2019).
2. Alcamo, E.A., Chirivella, L., Dautzenberg, M., *et al.* Satb2 regulates callosal projection neuron identity in the developing cerebral cortex. *Neuron* **57(3)**, 364-377 (2008).
3. Cera, I., Whitton, L., Donohoe, G., *et al.* Genes encoding SATB2-interacting proteins in adult cerebral cortex contribute to human cognitive ability. *PLoS Genet.* **15(2)**, e1007890 (2019).
4. Zhang, Y.-J., Chen, J.-W., He, X.-S., *et al.* SATB2 is a promising biomarker for identifying a colorectal origin for liver metastatic adenocarcinomas. *EBioMedicine* **28**, 62-69 (2018).
5. Zhou, J., Chen, J., Xu, W., *et al.* Common variants in SATB2 are associated with schizophrenia in Uygur Chinese population. *Psychiatr. Genet.* **29(4)**, 120-126 (2018).

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