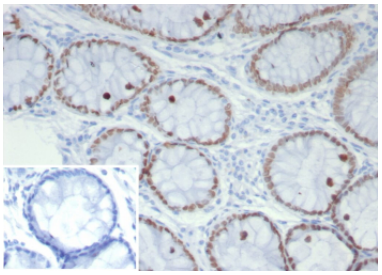
SATB2 Antibody Mouse Monoclonal / Special AT-rich sequence-binding protein 2 [clone SATB2/7489] (V5895)

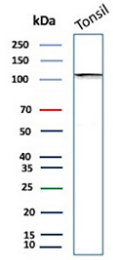
Catalog No.	Formulation	Size
V5895-100UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5895-20UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug
V5895SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

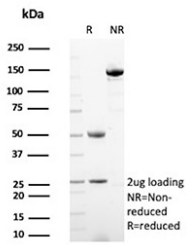
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	SATB2/7489
UniProt	Q9UPW6
Localization	Nucleus
Applications	Immunohistochemistry (FFPE): 1-2ug/ml Western Blot: 2-4ug/ml
Limitations	This SATB2/Special AT-rich sequence-binding protein 2 antibody is available for research use only.



Immunohistochemistry analysis of SATB2 in human colon tissue. Formalin-fixed, paraffin-embedded human colon tissue stained with SATB2 antibody mouse monoclonal SATB2/7489. Nuclear brown chromogenic staining is observed in colonic epithelial cells, consistent with SATB2-positive nuclei. Inset shows PBS instead of primary antibody as a secondary-only negative control. Staining of formalin-fixed tissues requires heating tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 45 min at 95oC followed by cooling at RT for 20 minutes.



Western blot analysis of human tonsil cell lysate using SATB2/Special AT-rich sequence-binding protein 2 antibody (clone SATB2/7489). A single band is detected at approximately 100 kDa, which is slightly higher than the predicted molecular weight of SATB2 (~83 kDa), consistent with post-translational modification and known aberrant migration of chromatin-associated transcription factors.



SDS-PAGE Analysis of purified SATB2/Special AT-rich sequence-binding protein 2 antibody (clone SATB2/7489). Confirmation of Purity and Integrity of Antibody.

Description

SATB2 Antibody Mouse Monoclonal SATB2/7489 recognizes Special AT-rich sequence-binding protein 2, a nuclear transcriptional regulator encoded by the SATB2 gene located on chromosome 2q33.1. SATB2 is a chromatin organizer that binds matrix attachment regions of DNA and coordinates higher-order chromatin looping with gene transcription. The protein contains two CUT domains and a homeodomain that enable sequence-specific DNA binding and regulation of large gene networks. SATB2 is predominantly localized to the nucleus, where it demonstrates a characteristic granular or reticular staining pattern reflecting its role in chromatin architecture and transcriptional control.

SATB2 is strongly expressed in glandular epithelial cells of the lower gastrointestinal tract, particularly colorectal mucosa, where it contributes to epithelial differentiation and maintenance of colonic identity. It is also expressed during embryonic development in cortical neurons and osteoblast precursors, where it regulates genes involved in neuronal specification, craniofacial morphogenesis, and skeletal formation. Genetic alterations in SATB2 have been associated with developmental abnormalities, including SATB2-associated syndrome, characterized by craniofacial defects and neurodevelopmental delay.

In research and diagnostic investigation contexts, SATB2 is widely studied as a nuclear marker of colorectal epithelial origin. Strong nuclear expression is frequently observed in colorectal adenocarcinomas, making SATB2 a valuable tool for studying tumor differentiation and lineage in experimental pathology settings. Expression has also been reported in osteogenic tumors and selected lower gastrointestinal neoplasms, consistent with its developmental and tissue-specific roles.

As a mouse monoclonal antibody, clone SATB2/7489 is designed to recognize a specific epitope on the SATB2 protein, supporting consistent and reproducible detection of nuclear SATB2 expression. Monoclonal specificity may reduce background staining and enhance signal clarity in fixed tissue specimens and other research applications. SATB2 Antibody mouse monoclonal SATB2/7489 is suitable for investigating nuclear SATB2 expression in studies focused on colorectal biology, neuronal differentiation, skeletal development, and chromatin organization.

Researchers investigating colorectal tumor markers, epithelial lineage determination, and chromatin-associated transcriptional regulation may also be interested in our SATB2 Antibody / Colorectal and Lineage Marker page featuring validated immunohistochemistry and western blot applications for colorectal pathology research.

Application Notes

Optimal dilution of the SATB2/Special AT-rich sequence-binding protein 2 antibody should be determined by the researcher.

Immunogen

A recombinant fragment (around amino acids 150-350) of human SATB2 protein (exact sequence is proprietary) was used as the immunogen for the SATB2/Special AT-rich sequence-binding protein 2 antibody mouse monoclonal SATB2/7489.

Storage

SATB2/Special AT-rich sequence-binding protein 2 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

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