SATB2 Antibody for IHC / Transcription factor SATB2 [clone MSVA-702R] (V6075)

Catalog No.	Formulation	Size
V6075-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6075-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-702R
UniProt	Q9UPW6
Localization	Nucleus matrix
Applications	Immunohistochemistry (FFPE): 1:100-1:200
Limitations	This SATB2/Transcription factor SATB2 antibody is available for research use only.



SATB2 Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of Special AT-rich sequence-binding protein 2 SATB2 in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using recombinant rabbit monoclonal antibody clone MSVA-702R. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates predominantly nuclear localization, with strong nuclear staining observed in colorectal mucosal epithelial cells, while most other tissues show minimal to absent staining. Within tumor tissue microarrays, nuclear positivity is detected in colorectal adenocarcinoma and select tumors of colorectal origin, whereas many non-colorectal malignancies remain negative. Evaluation across large TMA panels enables direct comparison of SATB2 expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported expression profiles in the Human Protein Atlas and support its use as a marker of colorectal epithelial differentiation.

Description

SATB2 Antibody for IHC recognizes Transcription factor SATB2, also known as Special AT-rich sequence-binding protein

2, encoded by the SATB2 gene on chromosome 2q33.1. SATB2 is a nuclear matrix-associated transcription factor that functions as a chromatin organizer, binding AT-rich DNA elements and coordinating higher-order chromatin architecture with gene expression. The protein contains two CUT domains and a homeodomain that enable sequence-specific DNA binding and recruitment of transcriptional regulatory complexes. SATB2 localizes predominantly to the nucleus, where it exhibits a granular or reticular staining pattern reflecting its role in chromatin remodeling and transcriptional control.

SATB2 plays a central role in embryonic development, particularly in cortical neuron differentiation, craniofacial patterning, and osteoblast lineage commitment. In the developing cerebral cortex, SATB2 regulates projection neuron identity and connectivity by controlling transcriptional networks essential for neuronal specification. In skeletal tissues, it supports osteogenic differentiation and bone formation by modulating genes involved in extracellular matrix production and mineralization. In adult tissues, SATB2 expression is most prominent in glandular epithelial cells of the lower gastrointestinal tract, especially colorectal mucosa, where it contributes to maintenance of regional epithelial identity and differentiation.

In research and pathology-focused investigations, SATB2 is widely studied as a nuclear marker of colorectal epithelial origin. Strong nuclear expression is frequently observed in colorectal adenocarcinomas, supporting its use in studies evaluating tumor differentiation and lineage. SATB2 expression has also been reported in osteogenic tumors and select lower gastrointestinal neoplasms, reflecting its developmental and tissue-specific functions.

Clone MSVA-702R is a rabbit monoclonal antibody designed for immunohistochemical detection of SATB2 in formalin-fixed, paraffin-embedded tissues. Epitope-specific recognition supports clear nuclear staining with minimal background in optimized conditions. SATB2 Antibody for IHC (MSVA-702R) is suitable for detecting nuclear SATB2 expression in research applications focused on colorectal biology, neuronal development, skeletal differentiation, and chromatin organization.

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

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

1. Optimal dilution of the SATB2/Transcription factor SATB2 antibody for IHC should be determined by the researcher.

2. This SATB2/Transcription factor SATB2 antibody is recombinantly produced by expression in CHO cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

Synthetic peptide corresponding to residues within aa200-300 corresponding to human SATB2 was used as the immunogen for the SATB2/Transcription factor SATB2 antibody for IHC.

Storage

SATB2/Transcription factor SATB2 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

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