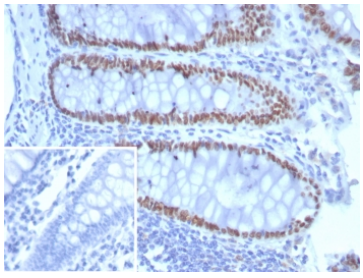
SATB2 Antibody Recombinant Rabbit MAb [clone SATB2/8292R] (V4934)

Catalog No.	Formulation	Size
V4934-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4934-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4934SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

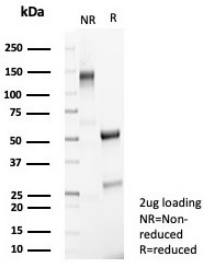
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	SATB2/8292R
Purity	Protein A/G affinity
UniProt	Q9UPW6
Localization	Nucleus
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This SATB2 antibody is available for research use only.



Immunohistochemistry of SATB2 antibody in FFPE human colon carcinoma tissue. The recombinant rabbit monoclonal SATB2 antibody (clone SATB2/8292R) demonstrates strong nuclear staining in malignant gland-forming epithelial cells, consistent with SATB2 expression in colorectal epithelium. Surrounding stromal cells show minimal to no staining. The negative control inset, in which PBS was used in place of the primary antibody, confirms absence of non-specific secondary antibody binding. Heat-induced epitope retrieval was performed by boiling sections in pH 9 10mM Tris with 1mM EDTA for 20 minutes followed by cooling prior to staining.



SDS-PAGE analysis of purified, BSA-free SATB2 antibody (clone SATB2/8292R) as confirmation of integrity and purity.

Description

SATB2 Antibody Recombinant Rabbit MAb (clone SATB2/8292R) recognizes Special AT-rich sequence-binding protein 2, a nuclear chromatin organizer encoded by the SATB2 gene on chromosome 2q33.1. SATB2 functions as a genome architectural protein that binds AT-rich DNA sequences and anchors chromatin to the nuclear matrix, thereby coordinating higher-order chromatin looping with transcriptional regulation. The protein contains two CUT domains and a homeodomain that mediate sequence-specific DNA binding and recruitment of transcriptional regulatory complexes. SATB2 is predominantly localized to the nucleus, where it exhibits a granular or reticular staining pattern consistent with its role in chromatin remodeling and spatial genome organization.

SATB2 plays a critical role in embryonic development, particularly in cortical neuron differentiation, craniofacial morphogenesis, and osteoblast lineage commitment. In the developing cerebral cortex, SATB2 regulates projection neuron identity and gene expression programs required for appropriate neuronal connectivity. In skeletal tissues, it supports osteogenic differentiation by modulating transcriptional networks involved in bone formation. In adult tissues, SATB2 expression is most prominent in epithelial cells of the lower gastrointestinal tract, especially colorectal mucosa, where it contributes to maintenance of regional epithelial identity and differentiation.

Alterations in SATB2 expression or function have been associated with developmental syndromes and are widely investigated in colorectal cancer research. SATB2 is frequently studied as a nuclear marker of colorectal epithelial origin due to its consistent expression in normal and malignant colorectal epithelium. Evaluation of SATB2 protein expression can provide insight into lineage specification, differentiation status, and transcriptional regulatory pathways in epithelial, neuronal, and skeletal systems.

As a recombinant rabbit monoclonal antibody, clone SATB2/8292R is engineered for epitope-specific recognition of the SATB2 protein with defined binding characteristics and improved lot-to-lot consistency. Recombinant monoclonal design supports reproducible nuclear detection and reduced non-specific background. SATB2 Antibody recombinant rabbit mAb SATB2/8292R is suitable for detecting nuclear SATB2 expression in research applications focused on colorectal biology, neuronal development, skeletal differentiation, and chromatin organization mechanisms.

Application Notes

Optimal dilution of the SATB2 antibody should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 150-350) from the human protein was used as the immunogen for the SATB2 antibody recombinant rabbit mAb SATB2/8292R.

Storage

Aliquot the SATB2 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.