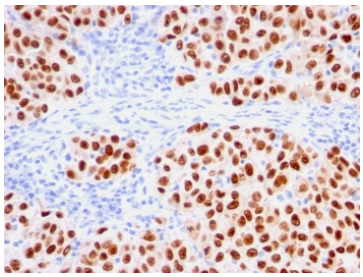
SOX10 Antibody rSOX10/1074 / SRY-Box Transcription Factor 10 Antibody [clone rSOX10/1074] (V3563)

Catalog No.	Formulation	Size
V3563-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3563-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3563SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3563IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

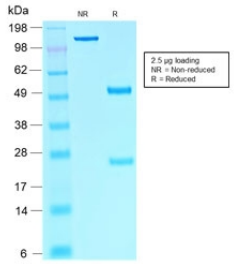
Recombinant MOUSE MONOCLONAL

Bulk quote request

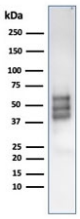
Availability	1-3 business days
Species Reactivity	Human, Mouse
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rSOX10/1074
Purity	Protein G affinity chromatography
UniProt	P56693
Localization	Nuclear
Applications	Immunohistochemistry (FFPE): 0.5-1ug/ml for 30 min at RT Western blot: 1-2ug/ml
Limitations	This SOX10 Antibody rSOX10/1074 / SRY-Box Transcription Factor 10 Antibody is available for research use only.



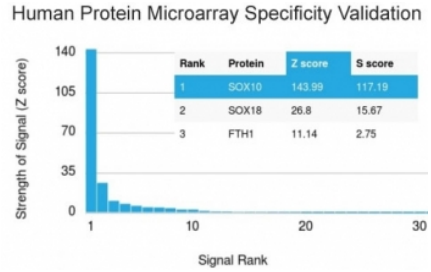
SOX10 Antibody rSOX10/1074 by IHC in Human Melanoma Tissue. Immunohistochemistry staining of FFPE human melanoma tissue using recombinant mouse monoclonal SOX10 antibody rSOX10/1074. Heat-induced epitope retrieval was performed by boiling tissue sections in 10 mM citrate buffer at pH 6 for 10-20 minutes, followed by cooling at room temperature for 20 minutes. Strong brown nuclear staining is observed in numerous melanoma cells, demonstrating expression of SRY-Box Transcription Factor 10. The surrounding stromal regions show comparatively little nuclear immunoreactivity, highlighting the predominantly tumor-associated staining pattern.



SDS-PAGE analysis of purified, BSA-free SRY-box 10/SOX10 antibody (clone rSOX10/1074) as confirmation of integrity and purity.



SOX10 Antibody rSOX10/1074 by WB in Human COLO-38 Cell Lysate. Western blot analysis of human COLO-38 melanoma cell lysate using recombinant mouse monoclonal SOX10 antibody rSOX10/1074. Immunoreactive bands are detected in the approximately 40-50 kDa region, near the calculated molecular weight of 50 kDa for SRY-Box Transcription Factor 10. SOX10 has been reported to exhibit multiple electrophoretic forms, with phosphorylation contributing to differences in protein migration.



SOX10 Antibody rSOX10/1074 by Protein Microarray Specificity Analysis. Protein microarray analysis of recombinant mouse monoclonal SOX10 antibody rSOX10/1074 using a HuProt array containing more than 19,000 full-length human proteins. Fluorescence signals were ranked to evaluate antibody binding across the protein array. The specificity profile shows a prominent leading signal relative to the remaining ranked proteins, supporting preferential recognition of SRY-Box Transcription Factor 10. Z-scores represent fluorescence signal strength relative to the array-wide mean, while S-scores measure separation between ranked protein signals.

Description

SOX10 Antibody rSOX10/1074 recognizes SOX10, a nuclear transcription factor belonging to the SRY-related high-mobility-group box family of DNA-binding proteins. Also known as SRY-Box Transcription Factor 10, SOX10 plays an essential role in neural crest development, cellular differentiation, and the maintenance of specialized cell lineages. The protein contains a conserved high-mobility-group (HMG) DNA-binding domain that enables recognition of regulatory DNA sequences and modulation of gene transcription. SOX10 is particularly important in melanocytes, Schwann cells, and enteric nervous system development.

During embryogenesis, SOX10 regulates the survival, migration, and differentiation of neural crest-derived progenitor cells. Its transcriptional activity helps establish melanocyte identity through regulation of microphthalmia-associated transcription factor (MITF) and other pigmentation-associated genes. SOX10 also participates in the development of peripheral glial cells, where it coordinates transcriptional programs required for Schwann cell differentiation and myelin formation.

In the peripheral nervous system, SOX10 cooperates with additional transcription factors to regulate genes involved in myelin production and maintenance. It also contributes to oligodendrocyte differentiation and myelination within the central nervous system. These functions make SRY-Box Transcription Factor 10 an important regulator of glial lineage development and nervous system organization.

SOX10 expression is widely investigated in melanoma research because many melanocytic tumors retain strong nuclear expression of this transcription factor. Immunohistochemical detection of SOX10 supports studies of melanocytic differentiation and helps characterize melanoma cells within complex tissue environments. SOX10 expression is also observed in peripheral nerve sheath tumors and subsets of breast and salivary gland carcinomas. Consequently, nuclear SOX10 staining must be interpreted in conjunction with tissue morphology and additional lineage-associated markers.

Pathogenic SOX10 variants are associated with neurocristopathies, including forms of Waardenburg syndrome and Waardenburg-Shah syndrome, which can involve pigmentation abnormalities, hearing impairment, and intestinal aganglionosis. These disorders illustrate the importance of SOX10 in melanocyte and enteric nervous system development. Altered SOX10 expression and transcriptional regulation are also relevant to investigations of melanoma progression, cellular plasticity, and resistance-associated differentiation states.

A SOX10 Antibody rSOX10/1074 from NSJ Bioreagents supports research investigating SRY-Box Transcription Factor 10 expression, neural crest differentiation, melanocytic lineage identity, glial development, and SOX10-associated malignancies.

For antibodies targeting additional proteins involved in neuronal development, glial differentiation, and nervous system biology, explore our Neuroscience Antibodies collection.

Application Notes

Optimal dilution of the SOX10 Antibody rSOX10/1074 / SRY-Box Transcription Factor 10 Antibody should be determined by the researcher.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Amino acids 115-269 from the human protein were used as the immunogen for the SOX10 Antibody rSOX10/1074.

Storage

Store the SOX10 Antibody rSOX10/1074 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

SRY-Box Transcription Factor 10 antibody, SRY-Box 10 antibody, SRY-Related HMG-Box 10 antibody, SOX-10 antibody, SOX 10 antibody, Transcription Factor SOX10 antibody, SRY-Box Protein 10 antibody

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