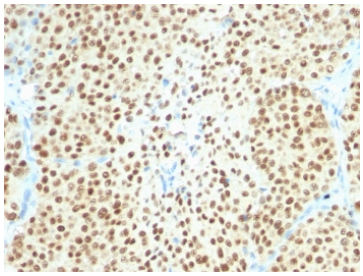
SOX10/Melanocytic Lineage Antibody [clone SOX10/2311R] (V3690)

Catalog No.	Formulation	Size
V3690-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3690-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3690SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3690IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

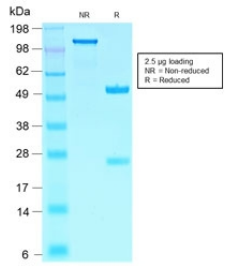
Recombinant RABBIT MONOCLONAL

Bulk quote request

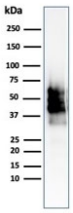
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	SOX10/2311R
Purity	Protein A affinity chromatography
UniProt	P56693
Localization	Nuclear
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT (1) Western Blot : 1-2ug/ml
Limitations	This SOX10/Melanocytic Lineage antibody is available for research use only.



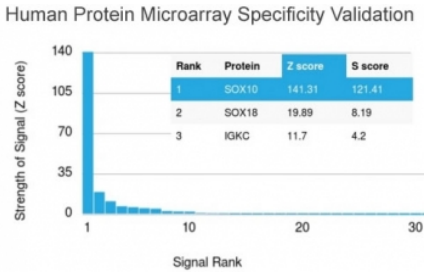
IHC testing of FFPE melanoma with SOX10/Melanocytic Lineage antibody (clone SOX10/2311R). Required HIER: boil sections in pH 9 10mM Tris with 1mM EDTA for 10-20 minutes, followed by cooling at RT for 20 minutes, prior to staining.



SDS-PAGE analysis of purified, BSA-free SOX10/Melanocytic Lineage antibody (clone SOX10/2311R) as confirmation of integrity and purity.



Western blot testing of human COLO-38 cell lysate with SOX10/Melanocytic Lineage antibody (clone SOX10/2311R). Expected molecular weight: 50-58 kDa.



Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using SOX10/Melanocytic Lineage antibody. These results demonstrate the foremost specificity of the SOX10/2311R mAb. Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.

Description

SOX10/Melanocytic Lineage Antibody recognizes SOX10, a nuclear transcription factor that regulates development and maintenance of melanocytes and peripheral glial cells. Encoded by the SOX10 gene, this HMG-box transcription factor binds DNA in a sequence-specific manner and orchestrates gene expression networks critical for neural crest-derived cell differentiation. SOX10 expression is essential for melanocyte specification during embryogenesis, acting upstream of MITF and influencing pigmentation-related genes involved in melanin production and melanocyte survival. In addition to its role in melanocyte biology, SOX10 regulates Schwann cell differentiation and peripheral nerve myelination, supporting glial maturation programs. In adult tissues, SOX10 expression is largely restricted to melanocytes within the basal epidermis and hair follicles and to Schwann cells along peripheral nerves, producing a characteristic nuclear staining pattern when detected by SOX10 antibody. This lineage specificity makes SOX10 antibody a powerful tool in dermatopathology and tumor biology research. SOX10 expression is frequently observed in melanoma and is considered a sensitive nuclear marker for melanocytic differentiation. It is also detected in clear cell sarcoma and certain peripheral nerve sheath tumors, reflecting their neural crest origin. In some carcinomas, including subsets of breast and salivary gland tumors, SOX10 expression may be associated with basal or myoepithelial phenotypes. Dysregulated SOX10 activity has been implicated in tumor progression, cellular plasticity, and invasive properties in melanoma. Melanocytic Lineage Antibody targeting SOX10 is therefore suitable for detecting nuclear SOX10 expression in immunohistochemistry and related research assays, supporting investigations in pigmentation biology, neural crest development, and oncologic research.

Application Notes

The stated application concentrations are suggested starting points. Titration of the SOX10/Melanocytic Lineage antibody may be required due to differences in protocols and secondary/substrate sensitivity.

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 of the human protein were used as the immunogen for the SOX10/Melanocytic Lineage antibody.

Storage

Store the SOX10/Melanocytic Lineage antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).