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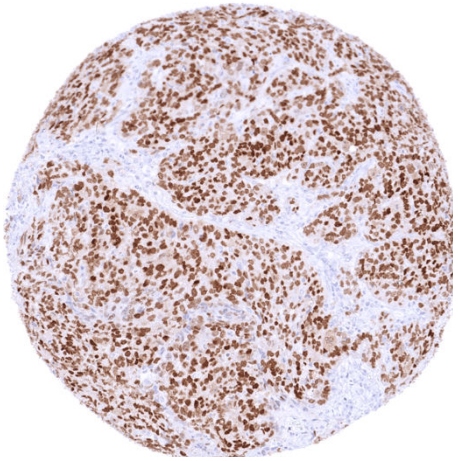
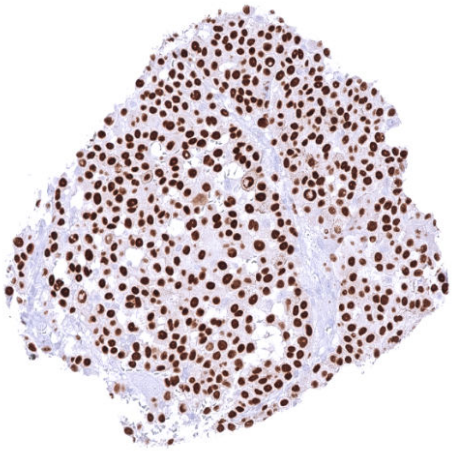
Anti- SOX10 Antibody
MSVA-710R / Recombinant Rabbit monoclonal

Human SwissProt	P56693
Human Gene Symbol	SOX10
Synonyms	Transcription factor SOX-10, DOM; PCWH; SOX10; SRY (sex determining region Y) box 10; SRY box containing gene 10; SRY related HMG box gene 10; Waardenburg syndrome type 2E(WS2E); WS4; Waardenburg syndrome type 4C (WS4C)
Specificity	SOX10
Immunogen	Recombinant human SOX10 fragment
Isotype	Rabbit / IgG
Species Reactivity	Human

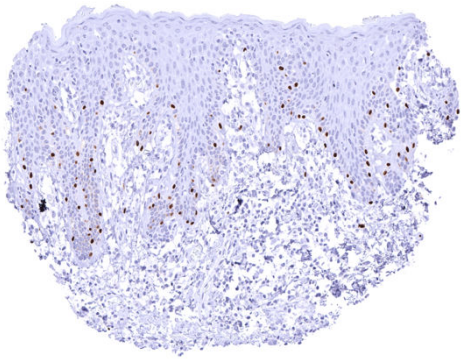
Localization	Intracellular
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	Purified antibody from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with <1% BSA & <0.1% azide. Antibody concentrate is optimized for dilution within dilution range using commercially available antibody diluent for IHC.
Positive Control	Breast: A moderate to strong nuclear SOX10 staining should be seen in breast epithelial cells.
Negative Control	Colon: SOX10 staining must be completely absent in epithelial cells.



Invasive breast cancer of no special type (NST) with distinct SOX10 positivity of tumor cells.



Malignant melanoma of the skin with strong nuclear SOX10 staining of all tumor cells.



Scattered SOX10 positive melanocytes in the epidermis of the skin.

Biology

SOX10 is one of at least 20 members of the family of SRY (sex-determining region Y)-related high mobility group box-containing (SOX) proteins most of which have a role in embryogenesis and cell differentiation. SOX10 is coded by the SOX10 gene on chromosome 22q13.1. It is critical for the development of neural crest cells, glial cells, Schwann cells, neurons, osteoblasts, smooth muscle cells and melanocytes. SOX10 is a nuclear protein which acts as a transcriptional activator after forming a protein complex with other proteins. In melanocytic cells, SOX10 expression is regulated by MITF. Heterozygous germline mutations occurring within and around SOX10 can cause various clinical syndroms characterized by pigment abnormalities, disorders of gastrointestinal motility, loss of smell, and hearing loss. Among normal tissues, SOX10 is preferentially expressed in melanocytes of the skin, glia cells of the cerebrum and the cerebellum, eccrine skin glands, salivary glands, and the breast. Among cancers, SOX10 expression preferentially occurs in gliomas, neoplasms of melanocytes and nerve sheaths, as well as of cancers derived from salivary, breast, and eccrine skin glands.

Potential Research Applications

-The prevalence and role of SOX10 expression in different tumor types needs to be further clarified.
-The function of SOX10 and its role in various diseases needs to be further investigated.
-The suitability of SOX10 as therapeutic target needs to be tested.

Protocol Suggestions

Dilution: 1:25 – 1:50. pH 9 is optimal. Freshly cut sections should be used (more than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

Limitations

This antibody is available for **research use only** and is not approved for use in diagnostics.

Warranty

There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.

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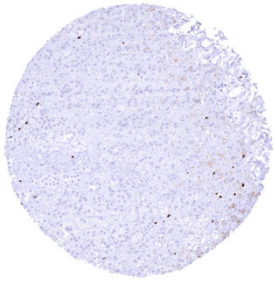
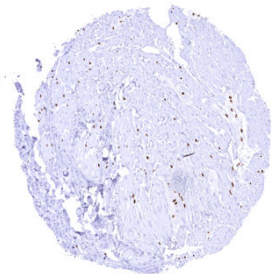
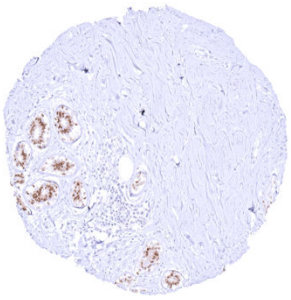


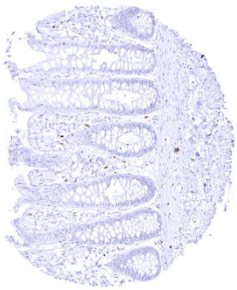
Adrenal gland – Few scattered spindle shaped SOX10 positive cells between adrenal glandular cells.



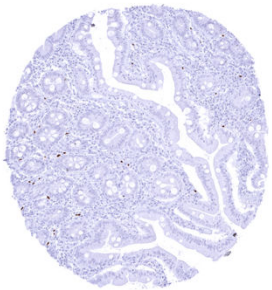
Appendix, muscular wall – A good number of scattered spindle shaped SOX10 positive cells between smooth muscle cells and ganglion cells.



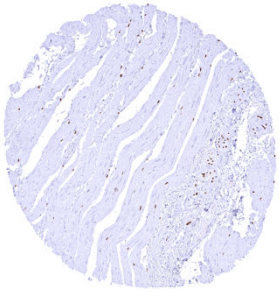
Breast – Moderate to strong nuclear SOX10 positivity of glandular cells (staining is somewhat weaker in myoepithelial cells).



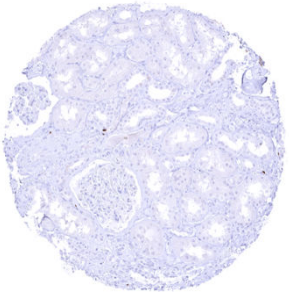
Colon descendens, mucosa – Few scattered spindle shaped SOX10 positive cells in the mucosa.



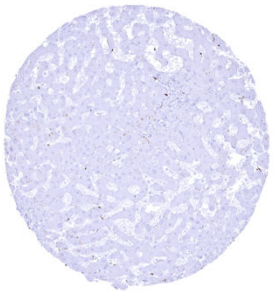
Duodenum, mucosa – Few scattered spindle shaped SOX10 positive cells in the mucosa.



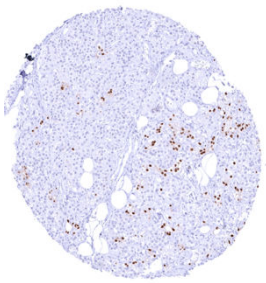
Esophagus, muscular wall – A good number of scattered spindle shaped SOX10 positive cells amongst smooth muscle cells and nerves.



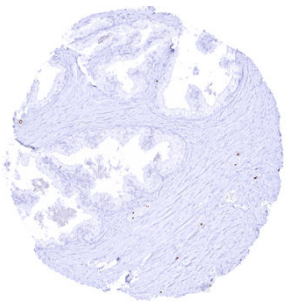
Kidney, cortex – Few scattered spindle shaped SOX10 positive cells between tubuli.



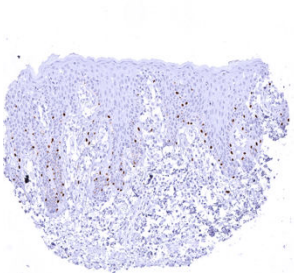
Liver – Few scattered spindle shaped SOX10 positive cells in portal fields.



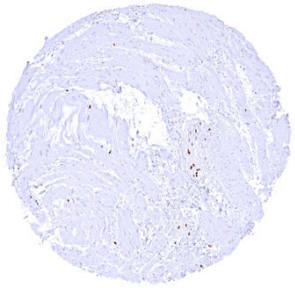
Parathyroid gland – Numerous scattered spindle shaped SOX10 positive cells between epithelial cells.



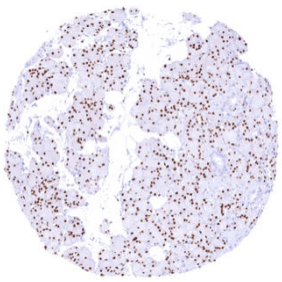
Prostate – Few scattered spindle shaped SOX10 positive cells in the stroma.



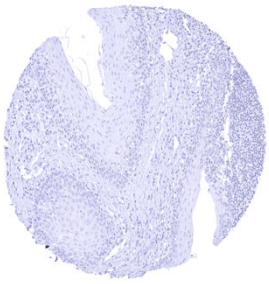
Skin – Numerous melanocytes show SOX10 positivity.



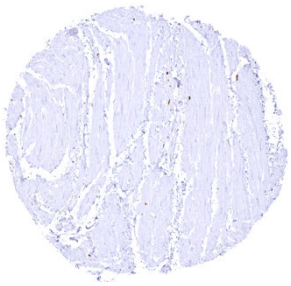
Stomach, muscular wall – A good number of scattered spindle shaped SOX10 positive cells along smooth muscle cells and nerves.



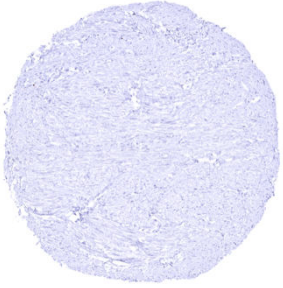
Submandibular gland – Strong SOX10 positivity of glandular cells while ductal cells are SOX10 negative.



Tonsil, surface epithelium



Urinary bladder, muscular wall – Very few scattered spindle shaped SOX10 positive cells between smooth muscle cells.



Uterus, myometrium – Few scattered spindle shaped SOX10 positive cells in the stroma.