## SOX10 Recombinant Antibody [PDH0-03] - Rat IgG1 (Chimeric) - BSA and Azide free

# HA610253

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| **Product Type:** | Recombinant Chimeric Antibody, primary antibodies |
| **Species reactivity:** | Mouse, Rat, Cynomolgus monkey, Pig |
| **Applications:** | IHC-Fr, IHC-P, IF-Tissue |
| **Molecular Wt:** | Predicted band size: 50 kDa |
| **Clone number:** | PDH0-03 |

**Description:** SOX10 is a neural crest transcription factor crucial for specification, maturation, and maintenance of Schwann cells and melanocytes. SOX10 is involved in the generation of myelin through interaction with OLIG1. In melanocytic cells the SOX10 gene expression is regulated by microphtalmia transcription factor. The SOX10 nuclear protein is widely expressed in glial cells, Schwann cells, and myoepithelial cells (salivary, bronchial, and mammary glands). SOX10 is expressed in virtually all cases of naevus and malignant melanoma (including 97-100% of desmoplastic and spindle cell melanomas), schwannoma, neurofibroma and granular cell tumour. SOX10 is expressed in the majority of cases of oligodendroglioma, astrocytoma and glioblastoma (few studies), desmoplastic/triple-negative breast carcinoma, acinic cell carcinoma, adenoid cystic carcinoma, epithelial-myoepithelial and myoepithelial carcinoma, and pleomorphic adenoma component of salivary gland adenocarcinoma. SOX10 is expressed in about half of cases of malignant nerve sheath tumour, and clear cell sarcoma (tendons and aponeuroses). Rare cases of luminal type breast ductal carcinoma and synovial sarcoma have shown SOX10 positivity. Apart from the above mentioned, epithelial and mesenchymal tumours are uniformly SOX10 negative. In paragangliomas/phaeochromocytomas and epithelial neuroendocrine tumours, SOX10 is only expressed in sustentacular cells but not in tumour cells. SOX10 is more specific than S100 protein in the detection of melanocytic and schwannian neoplasms, and has in some studies shown more sensitive. Skin and colon/appendix are recommended as positive and negative tissue controls for SOX10. In skin, moderate to strong nuclear staining reaction in virtually all melanocytes must be seen. The vast majority of myoepithelial cells lining sweat glands must show an at least moderate nuclear staining reaction. In colon/appendix, virtually all Schwann cells must display an as strong as possible nuclear staining reaction without any staining reaction of epithelial cells and smooth muscle cells. At present, and as specified in previous assessments, no reliable tissue component with consistent low level expression of SOX10 has been identified, monitoring the overall analytical sensitivity of an assay. Due to this issue both skin and colon/appendix are needed as tissue controls for SOX10.

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| **Immunogen:** | Synthetic peptide within C terminal human SOX10. |
| **Positive control:** | Mouse cerebellum tissue, rat cerebellum tissue. |
| **Subcellular location:** | Cytoplasm, Nucleus, Mitochondrion outer membrane. |
| **Database links:** | SwissProt: Q04888 Mouse \| O55170 Rat |
| **Recommended Dilutions:** | |
| **IHC-Fr** | 1:1,000 |
| **IHC-P** | 1:1,000 |
| **IF-Tissue** | 1:1,000 |
| **Storage Buffer:** | PBS (pH7.4). |
| **Storage Instruction:** | Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles. |
| **Purity:** | Protein A affinity purified. |

## Images

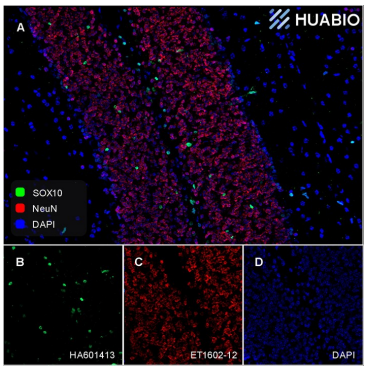


**Fig1:** Application: IHC-Fr

Species: Mouse

Site: Cerebellum

Sample: Frozen section

Antibody concentration: 1: 1,000 (SOX10, HA610253, green); 1:2,000 (NeuN, ET1602-12, red)

Antigen retrieval: Not required

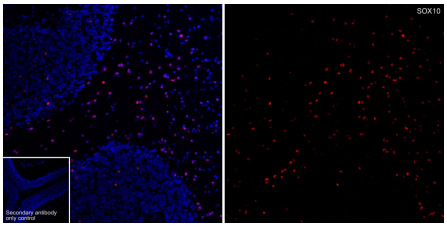


**Fig2:** Application: IF-tissue

Species: Mouse

Site: Cerebellum

Sample: Paraffin-embedded section

Antibody concentration: 1: 1,000

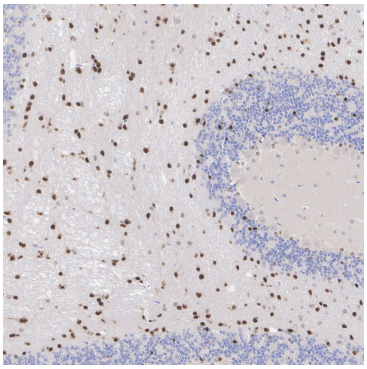

**Fig3:** Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Rat anti-SOX10 antibody (HA610253) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with $ddH_2O$ and PBS, and then probed with the primary antibody (HA610253) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

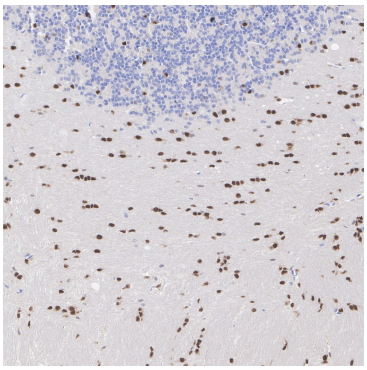

**Fig4:** Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Rat anti-SOX10 antibody (HA610253) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with $ddH_2O$ and PBS, and then probed with the primary antibody (HA610253) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

## Background References

1. Pingault V et al. SOX10: 20 years of phenotypic plurality and current understanding of its developmental function. J Med Genet. 2022 Feb
2. Yoon EC et al. TRPS1, GATA3, and SOX10 expression in triple-negative breast carcinoma. Hum Pathol. 2022 Jul