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SOX10 Antibody

Catalog # ASC12028

Product Information

Application	WB, E
Primary Accession	P56693
Other Accession	5902104, NP_008872, 6663
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	49911
Application Notes	SOX10 antibody can be used for Western blot at 1 - 2 □g/mL.

Additional Information

Gene ID	6663
Other Names	SOX10 Antibody: SRY (sex determining region Y)-box 10, DOM, WS4, PCWH, WS2E, WS4C
Precautions	SOX10 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SOX10
Function	Transcription factor that plays a central role in developing and mature glia (By similarity). Specifically activates expression of myelin genes, during oligodendrocyte (OL) maturation, such as DUSP15 and MYRF, thereby playing a central role in oligodendrocyte maturation and CNS myelination (By similarity). Once induced, MYRF cooperates with SOX10 to implement the myelination program (By similarity). Transcriptional activator of MITF, acting synergistically with PAX3 (PubMed:21965087). Transcriptional activator of MBP, via binding to the gene promoter (By similarity).
Cellular Location	Cytoplasm. Nucleus. Mitochondrion outer membrane {ECO:0000250|UniProtKB:Q04888}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q04888}; Cytoplasmic side {ECO:0000250|UniProtKB:Q04888}
Tissue Location	Expressed in fetal brain and in adult brain, heart, small intestine and colon

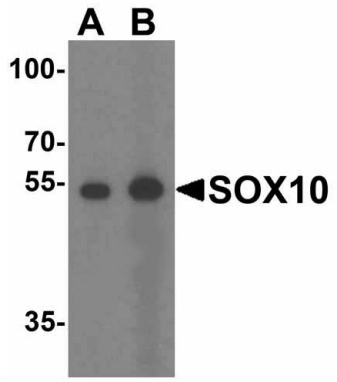
Background

SOX10 Antibody: SOX10 is a member of the SOX (SRY-related HMG-box) family of transcription factors involved in the regulation of embryonic development and the determination of the cell fate (1). The encoded protein may act as a transcriptional activator after forming a protein complex with other proteins (2). This protein acts as a nucleocytoplasmic shuttle protein and is important for neural crest and peripheral nervous system development (2). Mutations in this gene are associated with Waardenburg-Shah and Waardenburg-Hirschprung disease (3). SLC30A8 expression in beta-cells was found to be influenced by cytokine expression, particularly IFN-gamma and IL-1beta (4).

References

Pusch C, Hustert E, Pfeifer D, et al. The SOX10/Sox10 gene from human and mouse: sequence, expression, and transactivation by the encoded HMG domain transcription factor. Hum. Genet. 1998; 103:115-23.;Rehberg S, Lischka P, Glaser G, et al. Sox10 is an active nucleocytoplasmic shuttle protein, and shuttling is crucial for Sox10-mediated transactivation. Mol. Cell Biol. 2002; 22:5826-34.;Pingault V, Bondurand N, Kuhlbrodt K, et al. SOX10 mutations in patients with Waardenburg-Hirschprung disease. Nat. Genet. 1998; 18:171-3.;

Images



Western blot analysis of SOX10 in rat heart tissue lysate with SOX10 antibody at (A) 1 and (B) 2 µg/mL.