10320 Camino Santa Fe, Suite G
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SOX2 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1218a

Specification

SOX2 Antibody - Product Information

Application	**WB**
Primary Accession	P48431
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**34.3kDa KDa**

Description
SOX2: SRY (sex determining region Y)-box 2. Entrez Protein NP_003097. It is a member of the SRY-related HMG-box (SOX) family of transcription factors involved in the regulation of embryonic development and in the determination of cell fate. The product of this gene is required for stem-cell maintenance in the central nervous system, and also regulates gene expression in the stomach. Mutations in this gene have been associated with optic nerve hypoplasia and with syndromic microphthalmia, a severe form of structural eye malformation. This gene lies within an intron of another gene called SOX2 overlapping transcript (SOX2OT).

Immunogen
Purified recombinant fragment of SOX2 (aa1-170) expressed in E. Coli.

Formulation
Ascitic fluid containing 0.03% sodium azide.

SOX2 Antibody - Additional Information

Gene ID 6657

Other Names
Transcription factor SOX-2, SOX2

Dilution
WB~~1/500 - 1/2000

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
SOX2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

SOX2 Antibody - Protein Information

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Name SOX2

Function
Transcription factor that forms a trimeric complex with OCT4 on DNA and controls the expression of a number of genes involved in embryonic development such as YES1, FGF4, UTF1 and ZFP206 (By similarity). Binds to the proximal enhancer region of NANOG (By similarity). Critical for early embryogenesis and for embryonic stem cell pluripotency (PubMed:18035408). Downstream SRRT target that mediates the promotion of neural stem cell self-renewal (By similarity). Keeps neural cells undifferentiated by counteracting the activity of proneural proteins and suppresses neuronal differentiation (By similarity). May function as a switch in neuronal development (By similarity).

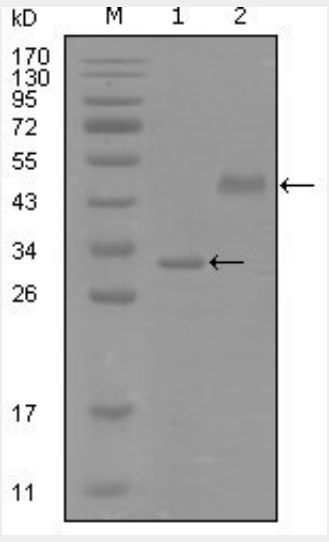
Cellular Location
Nucleus speckle {ECO:0000250|UniProtKB:Q05066}. Cytoplasm {ECO:0000250|UniProtKB:Q05738}. Nucleus {ECO:0000250|UniProtKB:Q05738}. Note=Acetylation contributes to its nuclear localization and deacetylation by HDAC3 induces a cytoplasmic delocalization (By similarity). Colocalizes in the nucleus with ZNF208 isoform KRAB-O and tyrosine hydroxylase (TH) (By similarity) Colocalizes with SOX6 in speckles. Colocalizes with CAML in the nucleus (By similarity). Nuclear import is facilitated by XPO4, a protein that usually acts as a nuclear export signal receptor (By similarity) {ECO:0000250|UniProtKB:Q05066, ECO:0000250|UniProtKB:Q05738}

SOX2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SOX2 Antibody - Images



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Figure 1: Western blot analysis using SOX2 mouse mAb against truncated Trx-SOX2 recombinant protein (1) and truncated MBP-SOX2(aa1-170) recombinant protein (2).

SOX2 Antibody - References

1. Exp Neurol. 2007 Apr;204(2):828-31. 2. Nature. 2008 Jan 10;451(7175):141-6.