SOX2 Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM2048a

Specification

SOX2 Antibody - Product Information

<table>
<thead>
<tr>
<th>Application</th>
<th>WB, IF, IHC-P, FC, E</th>
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</thead>
<tbody>
<tr>
<td>Primary Accession</td>
<td>P48431</td>
</tr>
<tr>
<td>Reactivity</td>
<td>Human</td>
</tr>
<tr>
<td>Host</td>
<td>Mouse</td>
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<tr>
<td>Clonality</td>
<td>Monoclonal</td>
</tr>
<tr>
<td>Isotype</td>
<td>IgG1</td>
</tr>
<tr>
<td>Clone Names</td>
<td>57CT23.4</td>
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</tbody>
</table>

SOX2 Antibody - Additional Information

Gene ID 6657

Other Names
Transcription factor SOX-2, SOX2

Target/Specificity
SOX2 recombinant protein is used to produce this monoclonal antibody.

Dilution
WB—1:200~2000
IF—1:100
IHC-P—1:50~100
FC—1:10~50

Format
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. 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

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.

Western blot analysis of lysate from NCCIT cell line, using SOX2 Antibody(Cat. #AM2048a). AM2048a was diluted at 1:1000. A goat anti-mouse IgG H&L(HRP) at 1:3000 dilution was used as the secondary antibody. Lysate at 20μg.

Western blot analysis of lysate from SOX2 protein, using SOX2 Antibody(Cat. #AM2048a). AM2048a was diluted at 1:4000. A goat anti-mouse IgG H&L(HRP) at 1:3000 dilution was used as the secondary antibody. Lysate at 20μg.
UTF1 and ZFP206 (By similarity). Critical for early embryogenesis and for embryonic stem cell pluripotency. May function as a switch in neuronal development. 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).

**Cellular Location**
Nucleus.

**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 Cytometry
- Cell Culture

Fluorescent image of A549 cell stained with SOX2 Antibody (Cat#AM2048a/SG110310AA). A549 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with SOX2 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-mouse antibody (green) was used (1:400, 50 min at 37°C). Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7 units/ml, 1 h at 37°C). SOX2 immunoreactivity is localized to Nucleus significantly.

Western blot analysis of SOX2 Antibody (Cat.#AM2048a) by SOX2 recombinant protein. SOX2 (arrow) was detected using the purified Mab.
Western blot analysis of SOX2 (arrow) using mouse monoclonal SOX2 antibody (Cat.#AM2048a). 293 cell lysates (2 μg/lane) either nontransfected (Lane 1) or transiently transfected with the SOX2 gene (Lane 2) (Origene Technologies).

Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with SOX2 Antibody (Cat.#AM2048a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Flow cytometric analysis of NCI-H460 cells using SOX2 Monoclonal Antibody (bottom histogram) compared to a negative control cell (top histogram). PE-conjugated goat-anti-mouse secondary antibodies were used for the analysis.
Fluorescent confocal image of SY5Y cells stained with SOX2 antibody. SY5Y cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AM2048a SOX2 primary antibody (1:100, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-mouse antibody (green) was used (1:1000, 1h). Note the highly specific localization of the SOX2 mainly to the nucleus.

SOX2 Antibody - Background

This intronless gene encodes 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).

SOX2 Antibody - References

References for protein:
4. Examination of SOX2 in variable ocular conditions identifies a recurrent deletion in microphthalmia and lack of mutations in other phenotypes. Reis LM, et al. Mol Vis, 2010 Apr 28. PMID 20454695.

References for SY5Y (SH-SY5Y; ATCC#CRL-2266):

References for MCF7 cell line:

SOX2 Antibody - Citations
- CRISPR/Cas9 targeted deletion of polyglutamine in spinocerebellar ataxia type 3 derived induced pluripotent stem cells.
- Physiological genomics identifies genetic modifiers of long QT syndrome type 2 severity.
- Generation of GZKHQi001-A and GZWWTi001-A, two induced pluripotent stem cell lines derived from peripheral blood mononuclear cells of Duchenne muscular dystrophy patients.
- Generation of integration-free induced pluripotent stem cells (GZHMUi001-A) by reprogramming peripheral blood mononuclear cells from a 47, XXX syndrome patient.
- Brother of the regulator of the imprinted site (BORIS) variant subfamily 6 is a novel target of lung cancer stem-like cell immunotherapy.
- Melatonin Inhibits Glioblastoma Stem-like cells through Suppression of EZH2-NOTCH1 Signaling Axis.
- ROCK Inhibition Facilitates In Vitro Expansion of Glioblastoma Stem-Like Cells.