


Anti-SOX2 antibody ab97959

★★★★☆ [73 Abreviews](#) [529 References](#) [8 Images](#)

Overview

Product name	Anti-SOX2 antibody
Description	Rabbit polyclonal to SOX2
Host species	Rabbit
Tested applications	Suitable for: IHC-P, WB, ICC/IF
Species reactivity	Reacts with: Mouse, Rat, Human Predicted to work with: Sheep, Horse, Chicken, Cow, Pig, Xenopus laevis, Zebrafish, Quail, Rhesus monkey, Rainbow trout, Spotted catshark, Thornback ray 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	ICC/IF: NCCIT and NIH/3T3 cells. Dissociated induced pluripotent stem cells from mouse embryonic fibroblasts. Mouse embryonic stem cells. WB: NCCIT, IOUD2, HUES7, F9 and MCF7 whole cell lysate. IHC: Human brain glioma.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS

Batches of this product that have a concentration < 1 mg/ml may have BSA added as a stabilizing agent. If you would like information about the formulation of a specific lot, please contact our Scientific Support Team who will be happy to help.

Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

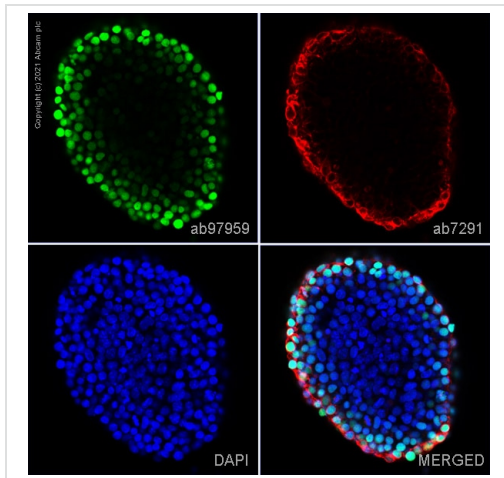
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab97959 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P	★★★★★ (24)	Use a concentration of 1 mg/ml.
WB	★★★★☆ (14)	Use a concentration of 1 µg/ml. Detects a band of approximately 34,40 kDa (predicted molecular weight: 34 kDa). Recombinant Human SOX2 protein (ab80520) can be used as a positive control in WB.
ICC/IF	★★★★★ (12)	Use a concentration of 1 µg/ml. We recommend Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody .

Target

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). Critical for early embryogenesis and for embryonic stem cell pluripotency.
Involvement in disease	Defects in SOX2 are the cause of microphthalmia syndromic type 3 (MCOPS3) [MIM:206900]. Microphthalmia is a clinically heterogeneous disorder of eye formation, ranging from small size of a single eye to complete bilateral absence of ocular tissues (anophthalmia). In many cases, microphthalmia/anophthalmia occurs in association with syndromes that include non-ocular abnormalities. MCOPS3 is characterized by the rare association of malformations including uni- or bilateral anophthalmia or microphthalmia, and esophageal atresia with trachoesophageal fistula.
Sequence similarities	Contains 1 HMG box DNA-binding domain.
Post-translational modifications	Sumoylation inhibits binding on DNA and negatively regulates the FGF4 transactivation.
Cellular localization	Nucleus.

Images

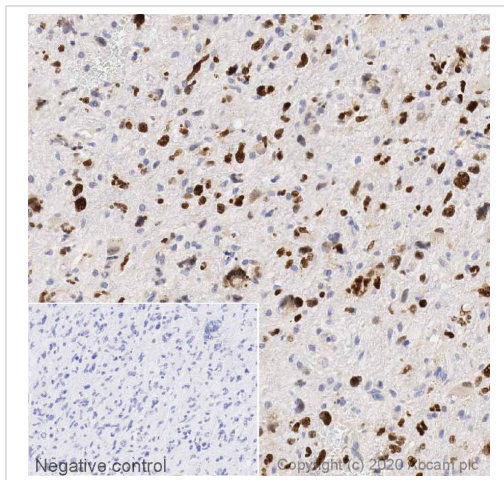


Immunocytochemistry/ Immunofluorescence - Anti-SOX2 antibody (ab97959)

ab97959 staining SOX2 in mES cells. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-Tween for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab97959 at 1µg/ml and **ab7291**, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with **ab150081**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and **ab150120**, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Also suitable in cells fixed with 100% methanol (5 min).

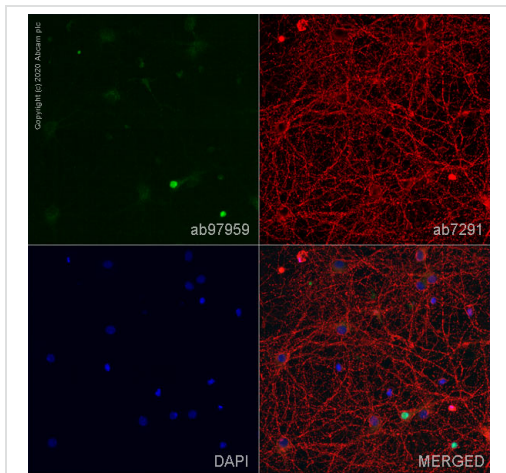
Image was acquired with a confocal microscope (Leica-Microsystems TCS SP8) and a single confocal section is shown.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SOX2 antibody (ab97959)

IHC image of SOX2 staining in Human brain glioma formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab97959, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

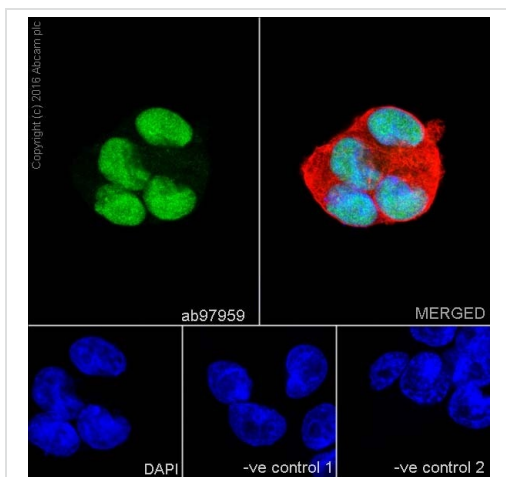
For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Immunocytochemistry/ Immunofluorescence - Anti-SOX2 antibody (ab97959)

ab97959 staining SOX2 in primary hippocampal rat neurons/glia, (obtained from Neuromics, cat. no. PC35101), DIV14. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab97959 at 0.1µg/ml and **ab7291**, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with **ab150081**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and **ab150120**, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.



Immunocytochemistry/ Immunofluorescence - Anti-SOX2 antibody (ab97959)

Cell line: NCCIT (human pluripotent embryonal carcinoma)

Target AbID: Ab97959 anti-Sox2, **Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody** was used.

Counterstain AbID: Ab7291 anti-Tubulin (Rabbit mAb), 97959

Fixative: 4% PFA

Permeabilisation: 0.1% Triton-X

Nuclear counter stain: DAPI

Comments: Confocal image showing negative staining on NCCIT cells

Target primary antibody dilution: 1:500

Target secondary antibody dilution: 1:1000 (2ug/mL)

Counterstain primary antibody dilution: 1:1000 (1ug/mL)

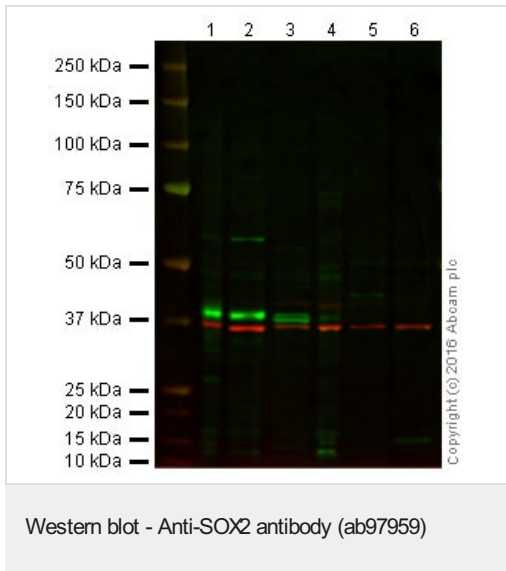
Counterstain secondary antibody dilution: 1:1000 (2ug/mL)

Negative control 1 primary antibody dilution: 1:500 (Ab97959)

Negative control 1 secondary antibody dilution: 1:1000 (2ug/mL)
(Ab150120)

Negative control 2 primary antibody dilution: 1:1000 (1ug/mL)
(Ab7291)

Negative control 2 secondary antibody dilution: 1:1000 (2ug/mL)
(Ab150077)



All lanes : Anti-SOX2 antibody (ab97959) at 1 µg

Lane 1 : NCCIT (Human embryonic carcinoma cell line) Whole Cell Lysate

Lane 2 : F9 (Mouse embryonic carcinoma cell line) Whole Cell Lysate

Lane 3 : MCF7 (Human breast adenocarcinoma cell line) Whole Cell Lysate

Lane 4 : C6 (Rat glial tumor cell line) Whole Cell Lysate

Lane 5 : Hippocampus (Rat) Tissue Lysate

Lane 6 : Spinal Cord (Rat) Tissue Lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Blots were developed with goat anti-rabbit IgG (H+L) and goat anti-mouse IgG (H+L) secondary antibodies at 1/10,000 dilution for 1 h at room temperature before imaging.

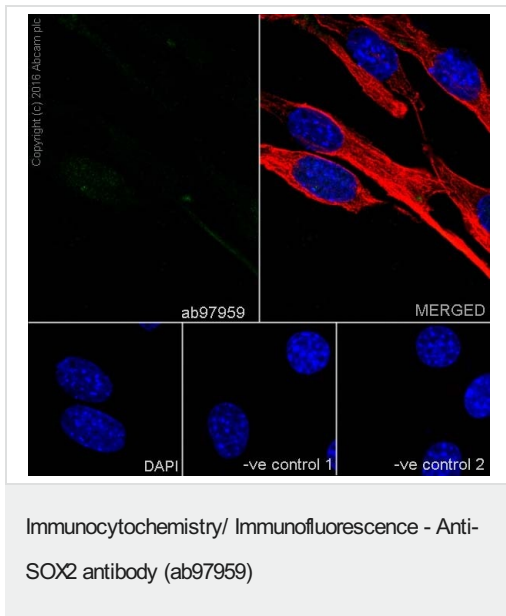
Performed under reducing conditions.

Predicted band size: 34 kDa

Observed band size: 40 kDa

Green signal from target - ab97959 observed at 40 kDa

Red signal from loading control **ab9484** (GAPDH) observed at 37 kDa



Cell line: NIH/3T3 (mouse embryonic fibroblast cell line)

Target AbID: Ab97959 anti-Sox2, used **Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody**

Counterstain AbID: Ab7291 anti-Tubulin (Rabbit mAb), Ab150120 AlexaFluor®594 Goat anti-Mouse secondary

Fixative: 4% PFA

Permeabilisation: 0.1% Triton-X

Nuclear counter stain: DAPI

Comments: Confocal image showing negative staining on NIH/3T3 cells

Target primary antibody dilution: 1:500

Target secondary antibody dilution: 1:1000 (2ug/mL)

Counterstain primary antibody dilution: 1:1000 (1ug/mL)

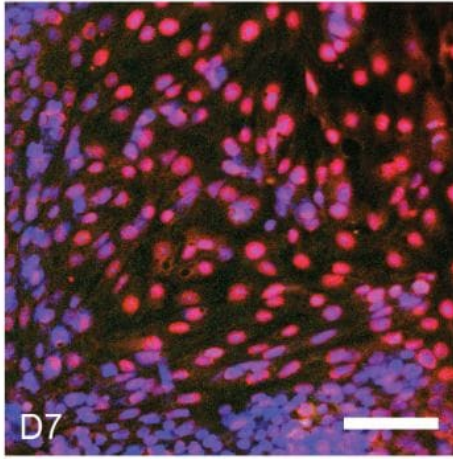
Counterstain secondary antibody dilution: 1:1000 (2ug/mL)

Negative control 1 primary antibody dilution: 1:500 (Ab97959)

Negative control 1 secondary antibody dilution: 1:1000 (2ug/mL) (Ab150120)

Negative control 2 primary antibody dilution: 1:1000 (1ug/mL) (Ab7291)

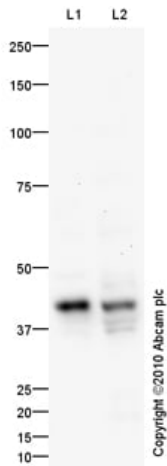
Negative control 2 secondary antibody dilution: 1:1000 (2ug/mL) (Ab150077)



ICC/IF analysis of dissociated induced pluripotent stem cells from mouse embryonic fibroblasts stained for SOX-2 (Red) using ab97959. TOPRO (purple). Scale bar=100 μ m

Immunocytochemistry/ Immunofluorescence - Anti-SOX2 antibody (ab97959)

Muratore CR et al. Comparison and Optimization of hiPSC Forebrain Cortical Differentiation Protocols. PLoS One 9:e105807 (2014). Reproduced under the Creative Commons license <http://creativecommons.org/licenses/by/4.0/>



All lanes : Anti-SOX2 antibody (ab97959) at 1 μ g/ml

Lane 1 : IOUD2 (Mouse embryonic stem cell) Whole Cell Lysate

Lane 2 : HUES7 (Human embryonic stem cell line) Whole Cell Lysate

Lysates/proteins at 10 μ g per lane.

Secondary

All lanes : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 34 kDa

Observed band size: 43 kDa

Additional bands at: 37 kDa, 39 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 3 minutes

Western blot - Anti-SOX2 antibody (ab97959)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours

- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors