


Product datasheet

Anti-SOX2 antibody [9-9-3] ab79351

★★★★★ [15 Abreviews](#) [77 References](#) [7 Images](#)

Overview

Product name	Anti-SOX2 antibody [9-9-3]
Description	Mouse monoclonal [9-9-3] to SOX2
Host species	Mouse
Tested applications	Suitable for: ICC/IF, WB, Flow Cyt (Intra)
Species reactivity	Reacts with: Mouse, Human, Apterionotus leptorhynchus Predicted to work with: Rat, Sheep, Horse, Chicken, Cow, Pig, Xenopus laevis, Rhesus monkey 
Immunogen	Synthetic peptide corresponding to Human SOX2 aa 300 to the C-terminus (C terminal) conjugated to keyhole limpet haemocyanin. (Peptide available as ab80398)
Positive control	ICC/IF: NCCIT, mES and F9 cells. WB: F9 and PC-3 whole cell lysate. Flow Cyt (Intra): F9 cells.
General notes	<p>This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com.</p> <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. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: 6.97% L-Arginine, PBS
Purity	IgG fraction

Clonality	Monoclonal
Clone number	9-9-3
Isotype	IgG1

Applications

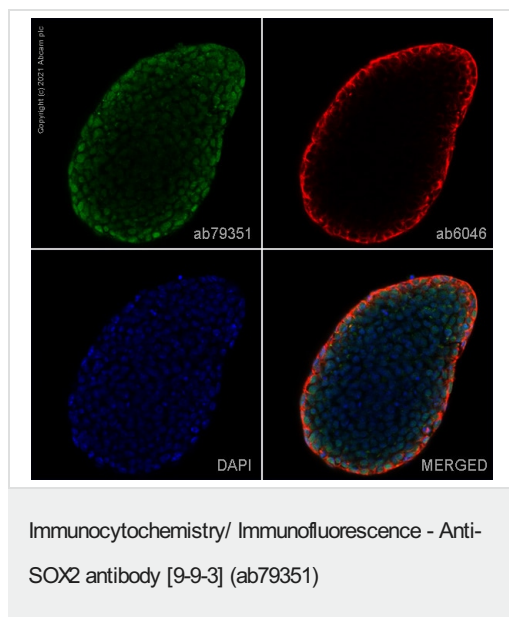
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab79351 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF	★★★★★ (4)	1/200.
WB	★★★★★ (4)	Use a concentration of 1 µg/ml. Detects a band of approximately 43 kDa (predicted molecular weight: 34 kDa).
Flow Cyt (Intra)		Use 0.1-1µg for 10 ⁶ cells. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this 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.

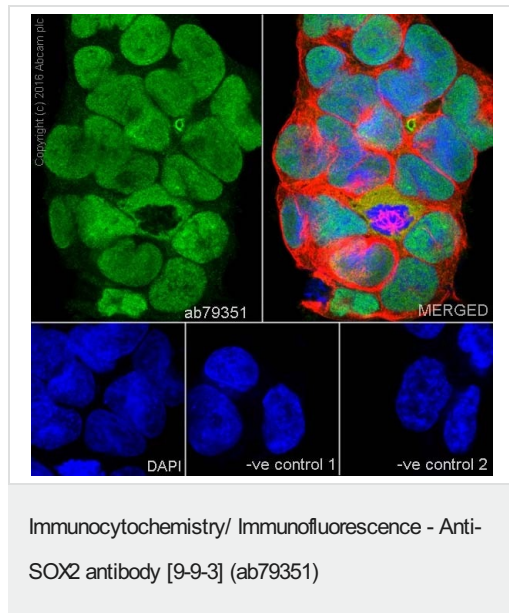
Images



ab79351 staining SOX2 in mES cells. The cells were fixed with 100% methanol (5 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 ab79351 at 1µg/ml and **ab6046**, Rabbit polyclonal to beta Tubulin - Loading Control. Cells were then incubated with **ab150117**, Goat polyclonal Secondary Antibody to Mouse IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (shown in green) and **ab150080**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Also suitable in cells fixed with 4% paraformaldehyde (10 min).

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

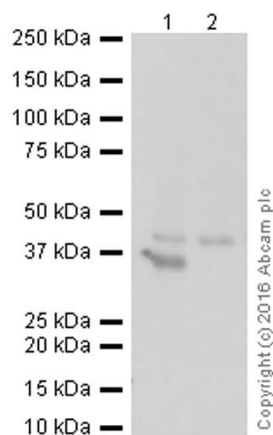


Immunofluorescent analysis of 4% PFA-fixed, 0.1% Triton X-100 permeabilized NCCIT (human pluripotent embryonal carcinoma) cells labeling SOX2 with ab79351 at 1/200 dilution, followed by **ab150113** AlexaFluor®488 Goat anti-Mouse secondary antibody at 1/1000 dilution (green). Confocal image showing showing positive staining on NCCIT cells. Counterstained with **ab179504** anti-Tubulin (Rabbit mAb, 1/1000), **ab150080** AlexaFluor®594 Goat anti-Rabbit secondary at a 1/1000 dilution. Nuclear stained with DAPI.

The negative controls are as follows:

-ve control 1: ab79351 at 1/200 dilution, followed by **ab150080** at 1/1000 dilution.

-ve control 2: **ab179504** at 1/1000 dilution, followed by **ab150113** at 1/1000 dilution.



Western blot - Anti-SOX2 antibody [9-9-3] (ab79351)

All lanes : Anti-SOX2 antibody [9-9-3] (ab79351) at 1/10000 dilution

Lane 1 : NCCIT whole cell lysate

Lane 2 : PC-3 whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

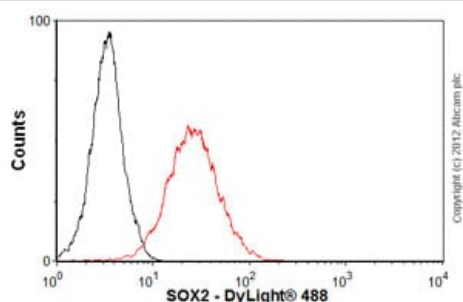
All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/2000 dilution

Predicted band size: 34 kDa

Observed band size: 34 kDa

Blocking buffer: 5% NFDM/TBST

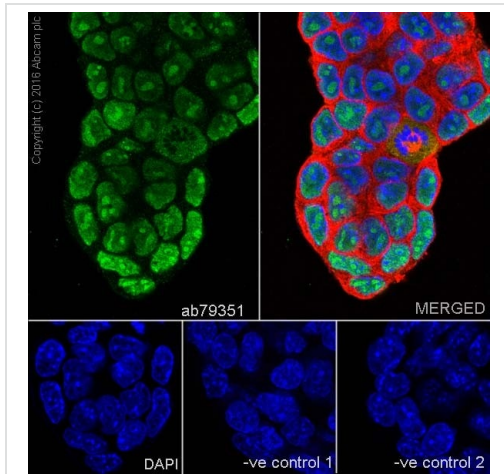
Dilution buffer: 5% NFDM/TBST



Flow Cytometry (Intracellular) - Anti-SOX2 antibody [9-9-3] (ab79351)

Overlay histogram showing F9 cells stained with ab79351 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab79351, 1 µg/1x10⁶ cells) for 30 min at 22°C. The secondary antibody used was a goat **anti-mouse DyLight® 488** (IgG H+L) ([ab96879](#)) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] ([ab91353](#), 2 µg/1x10⁶ cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive result in 80% methanol (5 min) fixed F9 cells used under the same conditions.

Please note that Abcam do not have any data for use of this antibody on non-fixed cells. We welcome any customer feedback.



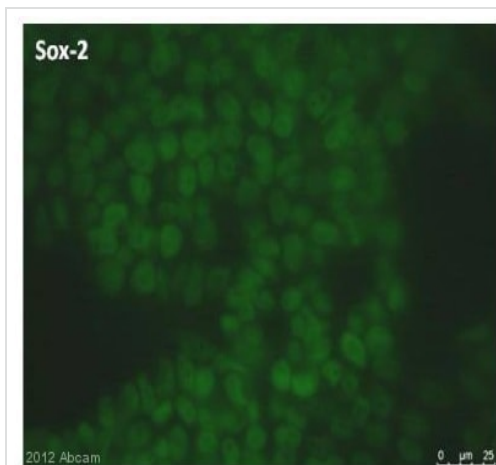
Immunocytochemistry/ Immunofluorescence - Anti-SOX2 antibody [9-9-3] (ab79351)

Immunofluorescent analysis of 4% PFA-fixed, 0.1% Triton X-100 permeabilized F9 (mouse embryonal carcinoma) cells labeling SOX2 with ab79351 at 1/200 dilution, followed by **ab150113** AlexaFluor®488 Goat anti-Mouse secondary antibody at 1/1000 dilution (green). Confocal image showing positive staining on F9 cells. Counterstained with **ab179504** anti-Tubulin (Rabbit mAb, 1/1000), **ab150080** AlexaFluor®594 Goat anti-Rabbit secondary at a 1/1000 dilution. Nuclear stained with DAPI.

The negative controls are as follows:

-ve control 1: ab79351 at 1/200 dilution, followed by **ab150080** at 1/1000 dilution.

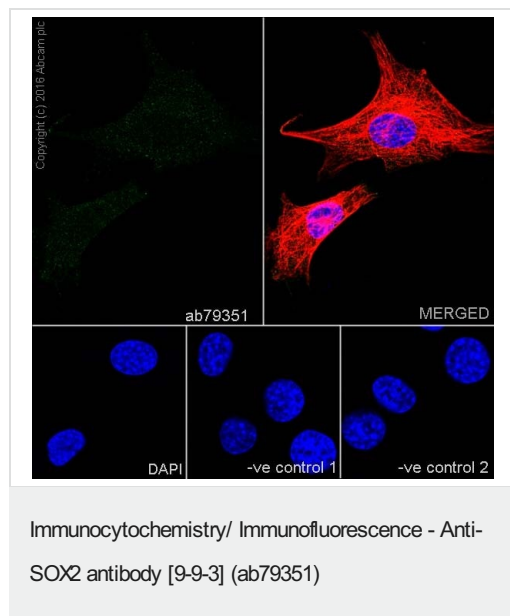
-ve control 2: **ab179504** at 1/1000 dilution, followed by **ab150113** at 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-SOX2 antibody [9-9-3] (ab79351)

This image is courtesy of an abreview by Joe Segal.

ICC/IF image of ab79351 stained D3 mouse embryonic stem cells. The cells were fixed in 4% Paraformaldehyde, permeabilized using 0.1% Triton X-100, blocked with 1% Goat serum, 0.1% BSA in PBS for 30 minutes at RT, before incubation with ab79351 at a 1/100 dilution for 2 hours at RT. The secondary used was an Alexa Fluor 488 conjugated goat anti-mouse polyclonal, used at 1/200 dilution.



Immunofluorescent analysis of 4% PFA-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 (mouse embryonic fibroblast cell line) **(Negative control)** cells labeling SOX2 with ab79351 at 1/200 dilution, followed by **ab150113** AlexaFluor®488 Goat anti-Mouse secondary antibody at 1/1000 dilution (green). Confocal image showing showing no staining on NIH/3T3 cells. Counterstained with **ab179504** anti-Tubulin (Rabbit mAb, 1/1000), **ab150080** AlexaFluor®594 Goat anti-Rabbit secondary at a 1/1000 dilution. Nuclear stained with DAPI.

The negative controls are as follows:

-ve control 1: ab79351 at 1/200 dilution, followed by **ab150080** at 1/1000 dilution.

-ve control 2: **ab179504** at 1/1000 dilution, followed by **ab150113** at 1/1000 dilution.

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