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SOX2 Antibody (C265)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP2048e

Specification

SOX2 Antibody (C265) - Product Information

Application	**IF, WB, FC,E**
Primary Accession	P48431
Other Accession	O42569, P48432, P48430, P54231
Reactivity	**Human**
Predicted	**Chicken, Mouse, Sheep, Xenopus**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit Ig**
Calculated MW	**34310**
Antigen Region	**251-284**

SOX2 Antibody (C265) - Additional Information

Gene ID 6657

Other Names
Transcription factor SOX-2, SOX2

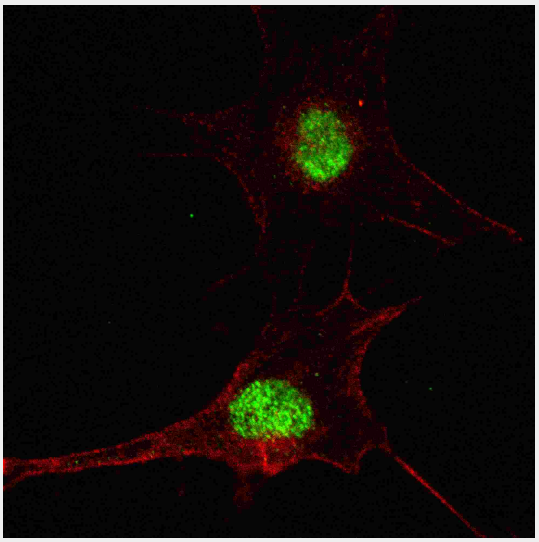
Target/Specificity
This SOX2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 251-284 amino acids from human SOX2.

Dilution
IF~~1:100
WB~~1:1000
FC~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation 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



Fluorescent confocal image of SY5Y cells stained with SOX2 (C265) antibody. SY5Y cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AP2048e SOX2 (C265) primary antibody (1:100, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:1000, 1h). Nuclei were counterstained with Hoechst 33342 (blue) (10 µg/ml, 5 min). Note the highly specific localization of the SOX2 immunosignal to the nucleus.

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SOX2 Antibody (C265) is for research use only and not for use in diagnostic or therapeutic procedures.

SOX2 Antibody (C265) - Protein Information

Name SOX2

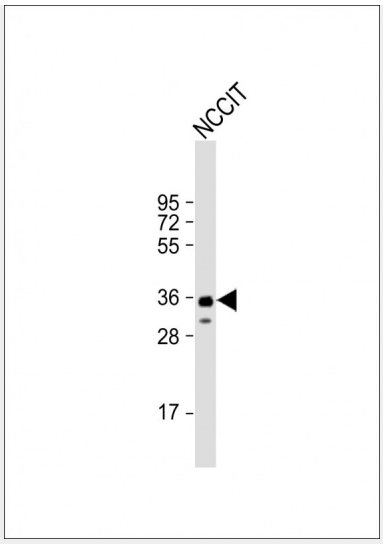
Function
Transcription factor that forms a trimeric complex with OCT4 on DNA and controls the expression of a number of genes involved in embryonic development such as YES1, FGF4, UTF1 and ZFP206 (By similarity). Binds to the proximal enhancer region of NANOG (By similarity). Critical for early embryogenesis 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 {ECO:0000250|UniProtKB:P48432}.

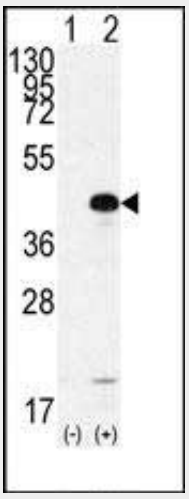
SOX2 Antibody (C265) - Protocols

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



Anti-SOX2 Antibody (C265) at 1:1000 dilution + NCCIT whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 34 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot analysis of SOX2 (arrow) using rabbit polyclonal SOX2 Antibody (C265) (Cat.#AP2048e). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the SOX2 gene (Lane 2) (Origene Technologies).

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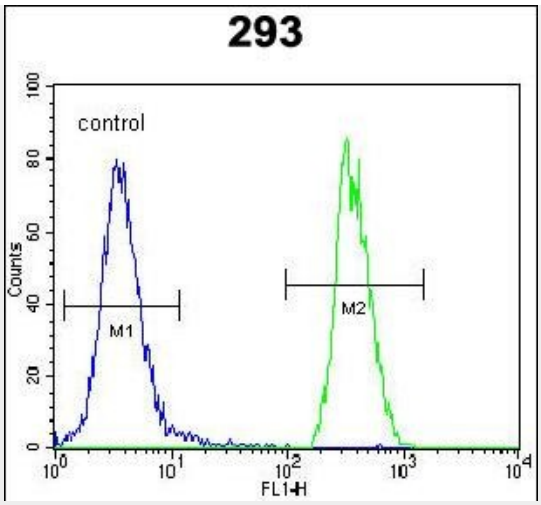

SOX2 Antibody (C265) (Cat. #AP2048e) flow cytometric analysis of 293 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

SOX2 Antibody (C265) - Background

SOX2 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. This protein may act as a transcriptional activator after forming a protein complex with other proteins. Mutations in the SOX2 gene have been associated with bilateral anophthalmia, a severe form of structural eye malformation.

SOX2 Antibody (C265) - References

References for protein:
1.Remenyi, A., et al., Genes Dev. 17(16):2048-2059 (2003).
2.Wiebe, M.S., et al., J. Biol. Chem. 278(20):17901-17911 (2003).
3.Fantes, J., et al., Nat. Genet. 33(4):461-463 (2003).
4.Schepers, G.E., et al., Dev. Cell 3(2):167-170 (2002).
5.Kamachi, Y., et al., Trends Genet. 16(4):182-187 (2000).
References for SY5Y (SH-SY5Y; ATCC#CRL-2266): 1. Ross RA, et al. Coordinate morphological and biochemical interconversion of human neuroblastoma cells. J. Natl. Cancer Inst. 71: 741-749, 1983. [PubMed: 6137586]; 2.

Biedler JL, et al. Multiple neurotransmitter synthesis by human neuroblastoma cell lines and clones. Cancer Res. 38: 3751-3757, 1978. [PubMed: 29704].