

SOX2 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2048f

Specification

SOX2 Antibody - Product Information

Application WB, FC,E
Primary Accession P48431
Reactivity Human
Host Rabbit
Clonality Polyclonal
Isotype Rabbit IgG
Calculated MW 34310

SOX2 Antibody - Additional Information

Gene ID 6657

Other Names

Transcription factor SOX-2, SOX2

Target/Specificity

This SOX2 antibody is generated from rabbits immunized with a recombinant protein of human SOX2.

Dilution

WB~~1:1000 FC~~1:10~50

E~~Use at an assay dependent concentration.

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

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, UTF1 and ZFP206 (By similarity). Binds to the proximal enhancer region of NANOG (By similarity).



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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

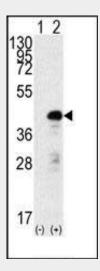
Nucleus speckle {ECO:0000250|UniProtKB:Q05066}. Cytoplasm {ECO:0000250|UniProtKB:Q05738}. Nucleus {ECO:0000250|UniProtKB:Q05738}. Note=Acetylation contributes to its nuclear localization and deacetylation by HDAC3 induces a cytoplasmic delocalization (By similarity). Colocalizes in the nucleus with ZNF208 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.

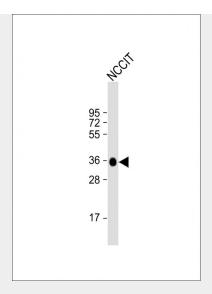
- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SOX2 Antibody - Images

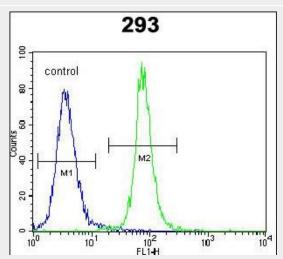


Western blot analysis of SOX2 (arrow) using rabbit polyclonal SOX2 Antibody (Cat.#AP2048f). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the SOX2 gene (Lane 2) (Origene Technologies).





Anti-SOX2 Antibody at 1:1000 dilution + NCCIT whole cell lysate Lysates/proteins at 20 μ g 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.



SOX2 Antibody (Cat. #AP2048f) 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 - 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 - References

Remenyi, A., et al., Genes Dev. 17(16):2048-2059 (2003). Wiebe, M.S., et al., J. Biol. Chem. 278(20):17901-17911 (2003). Fantes, J., et al., Nat. Genet. 33(4):461-463 (2003). Schepers, G.E., et al., Dev. Cell 3(2):167-170 (2002). Kamachi, Y., et al., Trends Genet. 16(4):182-187 (2000).