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SOX2 Antibody (A30)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2048g

Product Information

Application	WB, IF, E
Primary Accession	P48431
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB14785
Calculated MW	34310
Antigen Region	15-43

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 15-43 amino acids from human SOX2.
Dilution	WB~~1:1000 IF~~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 (A30) is for research use only and not for use in diagnostic or therapeutic procedures.

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 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}

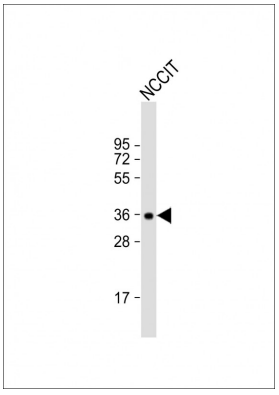
Background

The intronless gene for SOX2 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 encoded 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.

References

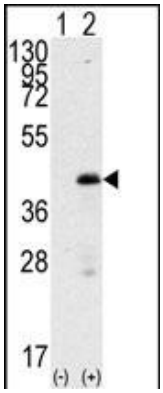
Remenyi, A., et al., Genes Dev. 17(16):2048-2059 (2003).
Wiebe, M.S., et al., J. Biol. Chem. 278(20):17901-17911 (2003).
Fantes, J., et al., Nat. Genet. 33(4):461-463 (2003).
Schepers, G.E., et al., Dev. Cell 3(2):167-170 (2002).
Kamachi, Y., et al., Trends Genet. 16(4):182-187 (2000).

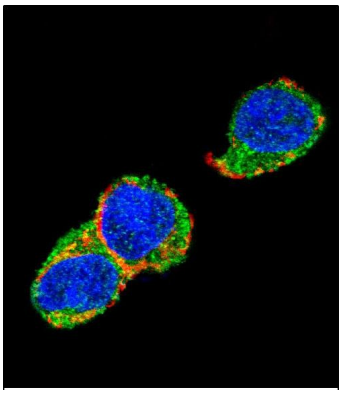
Images



Anti-SOX2 Antibody (A30) 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 (A30) (Cat.#AP2048g). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the SOX2 gene (Lane 2) (Origene Technologies).





Confocal immunofluorescent analysis of SOX2 Antibody (A30)(Cat#AP2048g) with 293 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green).Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).DAPI was used to stain the cell nuclear (blue).