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Sox2 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52658

Product Information

Application	WB, IHC-P, IF, FC, ICC
Primary Accession	P48431
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Conjugate	Unconjugated
Immunogen	Purified recombinant mouse Sox2 protein
Purification	Affinity Purified
Calculated MW	34310

Additional Information

Gene ID	6657
Other Names	ANOP3;cb236;Delta EF2a;lcc;MCOPS3;MGC148683;MGC2413;RGD1565646;Sex determining region Y box 2;SOX 2;Sox2;SOX2_HUMAN;SRY (sex determining region Y) box 2;SRY box containing gene 2;SRY related HMG box 2;SRY related HMG box gene 2;SRY-box 2;Transcription factor SOX 2;Transcription factor SOX-2;ysb.
Dilution	WB~~1:1000 IHC-P~~N/A IF~~1:50~200 FC~~1:100 ICC~~1:150
Format	Liquid in PBS with 0.09% (W/V) sodium azide
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

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}

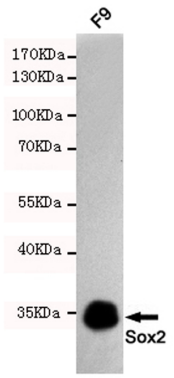
Background

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. May function as a switch in neuronal development. 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).

References

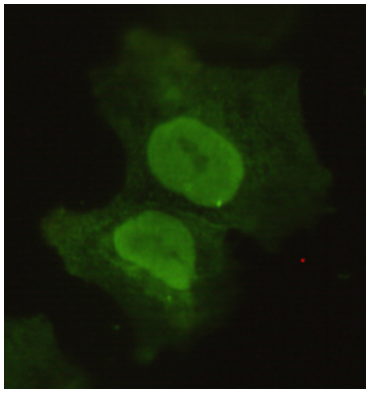
Stevanovic M.,et al.Mamm. Genome 5:640-642(1994).
Sadler L.A.,et al.Submitted (DEC-1992) to the EMBL/GenBank/DDBJ databases.
Fantes J.,et al.Nat. Genet. 33:461-463(2003).
Takahashi K.,et al.Cell 131:861-872(2007).
Rigbolt K.T.,et al.Sci. Signal. 4:RS3-RS3(2011).

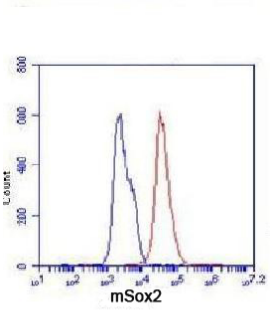
Images



Western blot detection of Sox2 in F9 cell lysates using Sox2 mouse mAb (1:1000 diluted).Predicted band size:35KDa.Observed band size:35KDa.

Immunocytochemistry of COS7 cells using anti-Sox2 mouse mAb diluted 1:150.





Flow Cytometry analysis of F9 cells stained with Sox2 (red, 1/100 dilution), followed by FITC-conjugated goat anti-mouse IgG. Blue line histogram represents the isotype control, normal mouse IgG.