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SOX2 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1496a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	P48432
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	10F10
Isotype	IgG1
Calculated MW	34454
Description	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. Critical for early embryogenesis and for embryonic stem cell pluripotency.
Immunogen	Purified recombinant fragment of human SOX2 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	20674
Other Names	Transcription factor SOX-2, Sox2, Sox-2
Dilution	WB~~1/500 - 1/2000 IHC~~1/500 - 1/2000 ICC~~N/A E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. 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.

Protein Information

Name	Sox2
Synonyms	Sox-2
Function	Transcription factor that forms a trimeric complex with POU5F1 (OCT3/4) on DNA and controls the expression of a number of genes involved in embryonic development such as YES1, FGF4, UTF1 and ZFP206 (PubMed:15863505,

PubMed:17097055, PubMed:19740739, PubMed:32703285). Binds to the proximal enhancer region of NANOG (PubMed:15863505). Critical for early embryogenesis and for embryonic stem cell pluripotency (By similarity). Downstream SRRT target that mediates the promotion of neural stem cell self-renewal (PubMed:22198669). 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:0000255|PROSITE-ProRule:PRU00267, ECO:0000269|PubMed:17097055, ECO:0000269|PubMed:19349578, ECO:0000269|PubMed:32127020}. Cytoplasm Note=Nuclear import is facilitated by XPO4, a protein that usually acts as a nuclear export signal receptor.

Tissue Location

Expressed in the cochlea (at protein level) (PubMed:32127020). Expressed in the brain and retina (PubMed:15863505, PubMed:7590241). A very low level of expression is seen in the stomach and lung (PubMed:15863505, PubMed:7590241). Expressed in the kidney (PubMed:15863505).

References

1. Proc Natl Acad Sci U S A. 2008 Nov 25;105(47):18396-401. 2. J Biol Chem. 2008 Nov 28;283(48):33730-5. 3. Nature. 2008 Oct 23;455(7216):1124-8.

Images

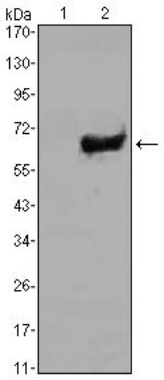


Figure 1: Western blot analysis using SOX2 mAb against HEK293 (1) and SOX2(AA: 2-317)-hIgGFc transfected HEK293 (2) cell lysate.

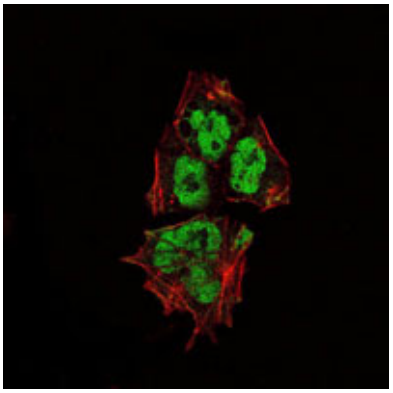
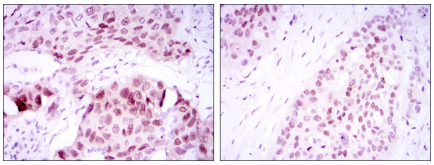


Figure 2: Immunofluorescence analysis of NTERA-2 cells using SOX2 mouse mAb (green). Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

Figure 3: Immunohistochemical analysis of paraffin-embedded lung cancer tissues (left) and esophageal cancer tissues (right) using SOX2 mouse mAb with DAB staining.



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