

**Anti-SOX2 Antibody**  
Catalog # ABO11593**Specification**

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**Anti-SOX2 Antibody - Product Information**

Application	IHC, WB
Primary Accession	<a href="#">P48431</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Transcription factor SOX-2(SOX2) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-SOX2 Antibody - Additional Information**

**Gene ID** 6657

**Other Names**

Transcription factor SOX-2, SOX2

**Calculated MW**

34310 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat<br>Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**Subcellular Localization**

Nucleus.

**Protein Name**

Transcription factor SOX-2

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg NaN<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence in the middle region of human SOX2(171-183aa YSMMQDQLGYPQH), different from the related mouse and rat sequence by one amino acid.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

Storage

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

#### Sequence Similarities

Contains 1 HMG box DNA-binding domain.

### Anti-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). Critical for early embryogenesis and for embryonic stem cell pluripotency (PubMed: <a href="http://www.uniprot.org/citations/18035408" target="\_blank">18035408</a>). 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

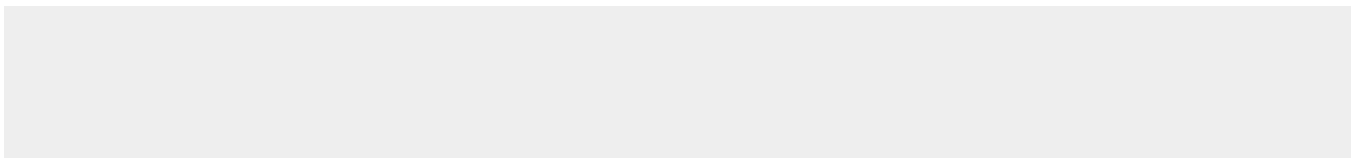
Nucleus speckle {ECO:0000250|UniProtKB:Q05066}. Cytoplasm {ECO:0000250|UniProtKB:Q05738}. Nucleus {ECO:0000250|UniProtKB:Q05738}. Note=Acetylation contributes to its nuclear localization and deacetylation by HDAC3 induces a cytoplasmic delocalization (By similarity). Colocalizes in the nucleus with ZNF208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

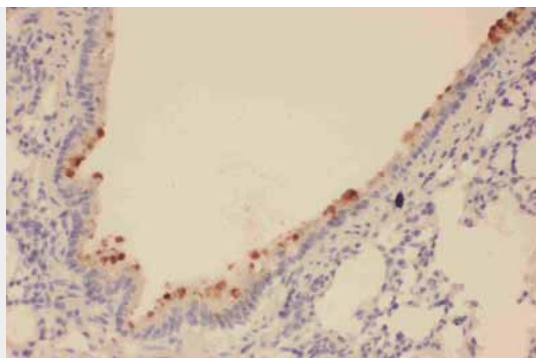
### Anti-SOX2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

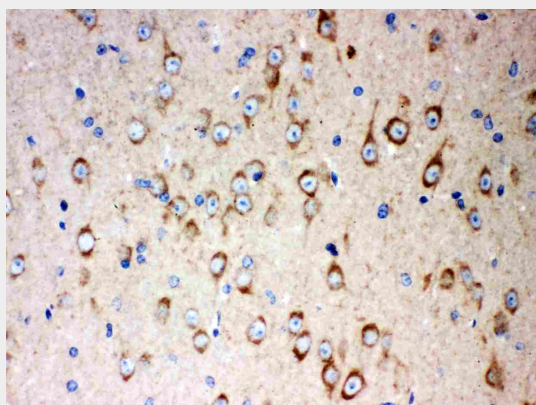
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Anti-SOX2 Antibody - Images

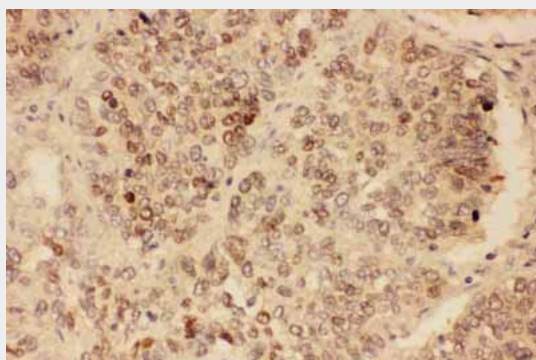




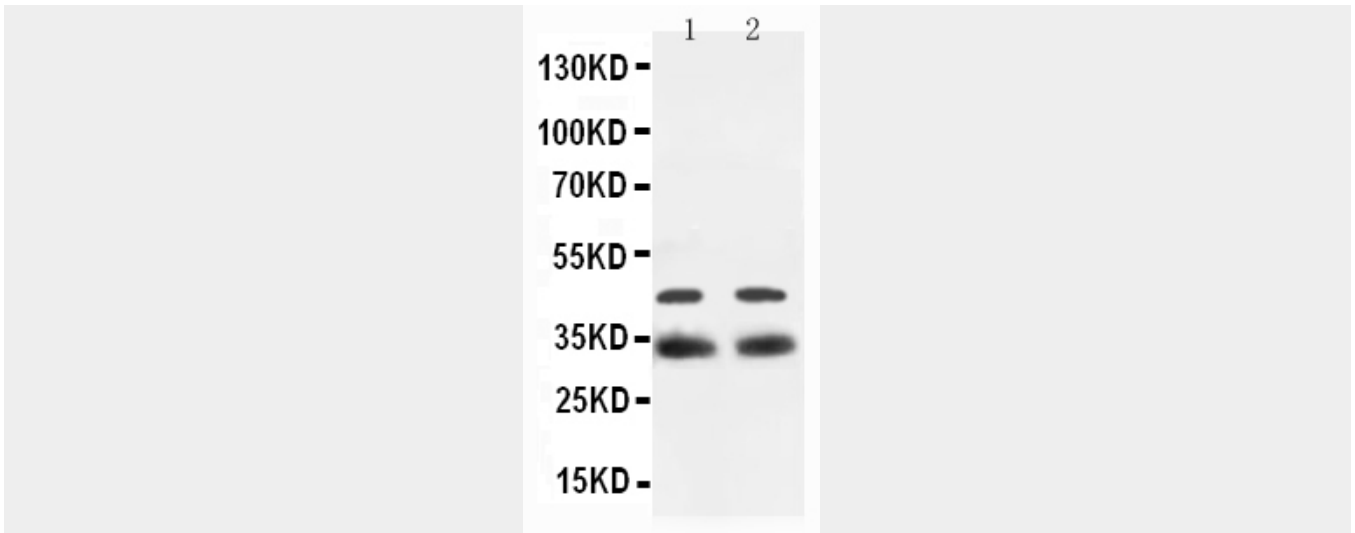
Anti-SOX2 antibody, ABO11593, IHC(P)IHC(P): Rat Lung Tissue



Anti-SOX2 antibody, ABO11593, IHC(P)IHC(P): Mouse Brain Tissue



Anti-SOX2 antibody, ABO11593, IHC(P)IHC(P): Human Lung Cancer Tissue



Anti-SOX2 antibody, ABO11593, All Western blotting  
All lanes: Anti-SOX2(ABO11593) at 0.5ug/ml  
Lane 1: Rat Brain Tissue Lysate at 40ug  
Lane 2: Mouse Brain Tissue Lysate at 40ug  
Predicted bind size: 34KD  
Observed bind size: 34KD

#### **Anti-SOX2 Antibody - Background**

SRY(sex determining region Y)-box 2, also known as SOX2, is a transcription factor that is essential for maintaining self-renewal, or pluripotency of undifferentiated embryonic stem cells. Sox2 is a member of the Sox family of transcription factors, which have been shown to play key roles in many stages of mammalian development. This gene is mapped to 3q26.33. It is found that SOX2 can regulate OCT3/4 expression and maintains ES pluripotency through upstream transcription factors. SOX2 is identified as a lineage-survival oncogene in lung and esophageal squamous cell carcinoma. In addition to those, SOX2 has a critical role in maintenance of embryonic and neural stem cells and holds great promise in research involving induced pluripotency, an emerging and very promising field of regenerative medicine.