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phospho-Sox2(S246) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP3750a

Specification

phospho-Sox2(S246) Antibody - Product Information

Application	**IF, DB,E**
Primary Accession	P48431
Other Accession	P48432, NP_003097.1, P54231
Reactivity	**Human**
Predicted	**Mouse, Sheep**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit Ig**
Calculated MW	**34310**

phospho-Sox2(S246) Antibody - Additional Information

Gene ID 6657

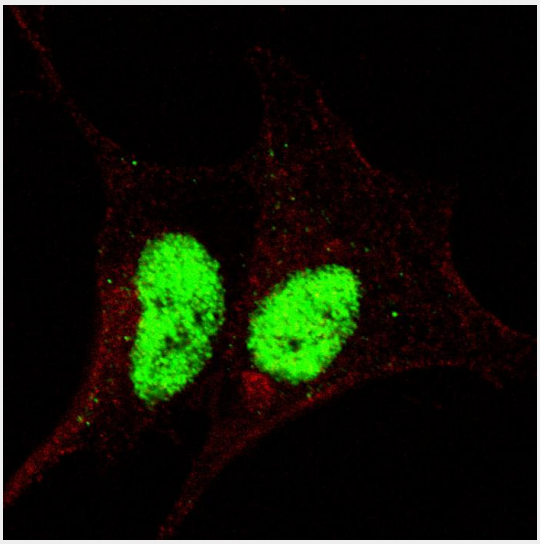
Other Names
Transcription factor SOX-2, SOX2

Target/Specificity
This Sox2 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S246 of human Sox2.

Dilution
IF~~1:200
DB~~1:500

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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.



Fluorescent confocal image of SY5Y cells stained with phospho-Sox2- S246 antibody. SY5Y cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AP3750a phospho-Sox2- S246 primary antibody (1:200, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:1000, 1h). Nuclei were counterstained with Hoechst 33342 (blue) (10 µg/ml, 5 min). Note the highly specific localization of the phospho-Sox2 immunosignal mainly to the nucleus.

Precautions
phospho-Sox2(S246) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

phospho-Sox2(S246) Antibody - Protein Information

Name SOX2

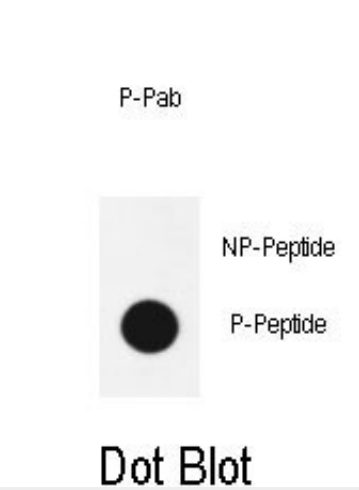
Function
Transcription factor that forms a trimeric complex with OCT4 on DNA and controls the expression of a number of genes involved in embryonic development such as YES1, FGF4, UTF1 and ZFP206 (By similarity). Binds to the proximal enhancer region of NANOG (By similarity). Critical for early embryogenesis and for embryonic stem cell pluripotency (PubMed: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 {ECO:0000250|UniProtKB:P48432}.

phospho-Sox2(S246) 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 Cytomety
- Cell Culture



Dot blot analysis of anti-phospho-Sox2-pS246 Phospho-specific Pab (Cat. #AP3750a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.6ug per ml.

phospho-Sox2(S246) Antibody - Background

This intronless gene 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 product of this gene is required for stem-cell maintenance in the central nervous system, and also regulates gene expression in the stomach. Mutations in this gene have been associated with optic nerve hypoplasia and with syndromic microphthalmia, a severe form of structural eye malformation. This gene lies within an intron of another gene called SOX2 overlapping transcript (SOX2OT).

phospho-Sox2(S246) Antibody - References

References for protein:
1.Gen, Y., et al. Cancer Genet. Cytogenet. 202(2):82-93(2010)
2.Ji, J., et al. Hum. Pathol. 41(10):1438-1447(2010)

3.Fang, X., et al. OMICS 14(4):369-384(2010)
4.Sholl, L.M., et al. Am. J. Surg. Pathol. 34(8):1193-1198(2010)
5.Zhang, D., et al. BMC Med. Genet. 11, 116 (2010)
References for SY5Y (SH-SY5Y; ATCC#CRL-2266): 1. Ross RA, et al. Coordinate morphological and biochemical interconversion of human neuroblastoma cells. J. Natl. Cancer Inst. 71: 741-749, 1983. [PubMed: 6137586]; 2. Biedler JL, et al. Multiple neurotransmitter synthesis by human neuroblastoma cell lines and clones. Cancer Res. 38: 3751-3757, 1978. [PubMed: 29704].