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phospho-Sox2(S246) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3750a

Product Information

Application	IF, DB, E
Primary Accession	P48431
Other Accession	P48432, NP_003097.1
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB26203
Calculated MW	34310

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 E~~Use at an assay dependent concentration.
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.
Precautions	phospho-Sox2(S246) Antibody 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}

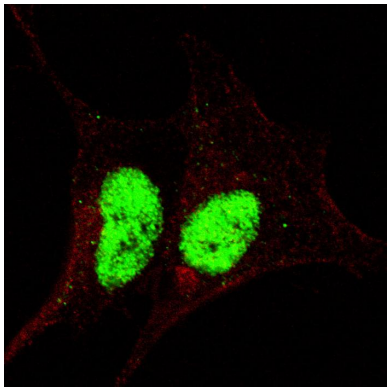
Background

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).

References

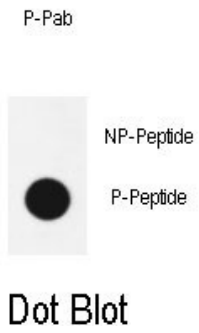
References for protein:
1.Gen, Y., et al. Cancer Genet. Cytogenet. 202(2):82-93(2010)
2.Ji, J., et al. Hum. Pathol. 41(10):1438-1447(2010)
3.Fang, X., et al. OMICS 14(4):369-384(2010)
4.Sholl, L.M., et al. Am. J. Surg. Pathol. 34(8):1193-1198(2010)
5.Zhang, D., et al. BMC Med. Genet. 11, 116 (2010)
References 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].

Images



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.

Dot blot analysis of anti-phospho-Sox2-pS246



Dot Blot

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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.