

# SOX2 Rabbit pAb

Catalog # AP99208

## Product Information

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| <b>Application</b>                      | IHC-P, IHC-F, IF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Primary Accession</b>                | <a href="#">P48431</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Other Accession</b>                  | <a href="#">P48431</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Host</b>                             | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Clonality</b>                        | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Calculated MW</b>                    | 34310                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Physical State</b>                   | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>                        | KLH conjugated synthetic peptide derived from human SOX2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Epitope Specificity</b>              | 1-100/317                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Isotype</b>                          | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Purity</b>                           | affinity purified by Protein A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Buffer</b>                           | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>SIMILARITY</b>                       | Contains 1 HMG box DNA-binding domain.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>SUBUNIT</b>                          | Interacts with ZSCAN10. Interacts with SOX3 and FGFR1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Post-translational modifications</b> | Sumoylation inhibits binding on DNA and negatively regulates the FGF4 transactivation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>DISEASE</b>                          | Defects in SOX2 are the cause of microphthalmia syndromic type 3 (MCOPS3) [MIM:206900]. Microphthalmia is a clinically heterogeneous disorder of eye formation, ranging from small size of a single eye to complete bilateral absence of ocular tissues (anophthalmia). In many cases, microphthalmia/anophthalmia occurs in association with syndromes that include non-ocular abnormalities. MCOPS3 is characterized by the rare association of malformations including uni- or bilateral anophthalmia or microphthalmia, and esophageal atresia with trachoesophageal fistula.                                                        |
| <b>Important Note</b>                   | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Background Descriptions</b>          | 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). [provided by RefSeq, Jul 2008]. |

## Additional Information

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| <b>Gene ID</b>     | 6657                                                                                                                                          |
| <b>Other Names</b> | ANOP3; MCOPS3; Sox-2; lcc; ysb; SOX2_HUMAN; SOX2; SOX2_MOUSE; SRY-box transcription factor 2; SRY (sex determining region Y)-box 2; SRY-box 2 |

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| <b>Dilution</b> | IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500                                                                                                                                                    |
| <b>Storage</b>  | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| <b>Name</b>              | SOX2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Function</b>          | 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="#">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). |
| <b>Cellular Location</b> | 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}                                                       |

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