

Mouse anti-Human SOX2 Monoclonal Antibody | anti-SOX2 antibody

SOX2 Antibody

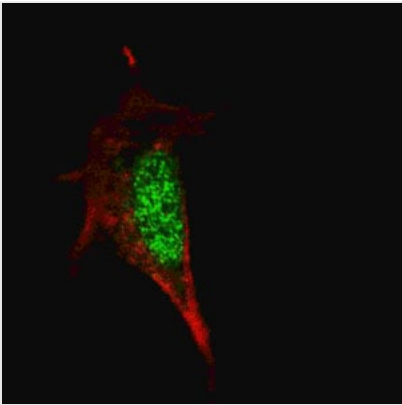
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA28642	Mouse	Human	Western Blot, Immunofluorescence, Immunohistochemistry, Flow Cytometry, Functional Assay, ELISA

PRODUCT SYNONYMS

SOX2; Monoclonal Antibody; SOX2 Antibody; Transcription factor SOX-2; anti-SOX2 antibody

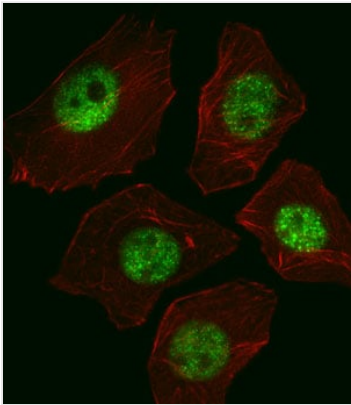
PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human
Clonality	Monoclonal
Isotype	IgG1
Clone Number	57CT23.3.4
Specificity	SOX2 recombinant protein is used to produce this monoclonal antibody.
Purity/Purification	This antibody is purified through a protein G column, followed by dialysis against PBS.
Form/Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide.
Applicable Applications for anti-SOX2 antibody	WB (Western Blot), IF (Immunofluorescence), IHC (Immunohistochemistry), FCM/FACS (Flow Cytometry), ELISA
Application Notes	WB~~1:200~2000 IF~~1:100 IHC-P~~1:50~100 FC~~1:10~50
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). Critical for early embryogenesis and for embryonic stem cell pluripotency. May function as a switch in neuronal development. 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).
Cellular Location	Nucleus.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 2 weeks. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.



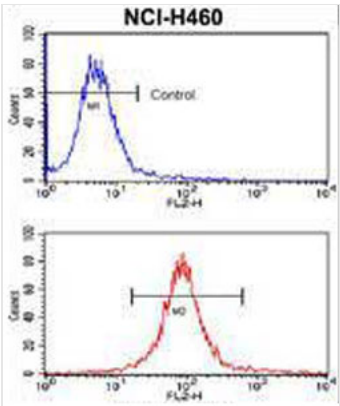
IF (Immunofluorescence)

Fluorescent confocal image of SY5Y cells stained with SOX2 antibody. SY5Y cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with SOX2 primary antibody (1:100, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-mouse antibody (green) was used (1:1000, 1h). Note the highly specific localization of the SOX2 mainly to the nucleus.



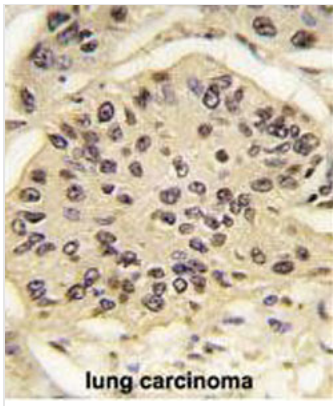
IF (Immunofluorescence)

Fluorescent image of A549 cell stained with SOX2 Antibody. A549 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with SOX2 primary antibody (1:25, 1 h at 37°C. For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-mouse antibody (green) was used (1:400, 50 min at 37°C. Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C. SOX2 immunoreactivity is localized to Nucleus significantly.



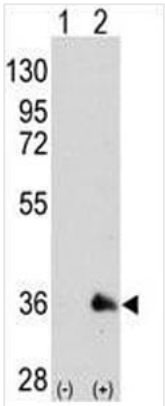
FCM (Flow Cytometry)

Flow cytometric analysis of NCI-H460 cells using SOX2 Monoclonal Antibody (bottom histogram) compared to a negative control cell (top histogram). PE-conjugated goat-anti-mouse secondary antibodies were used for the analysis.



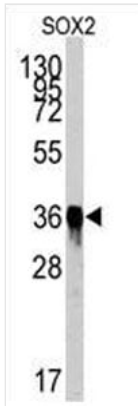
IHC (Immunohistochemistry)

Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with SOX2 Antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



WB (Western Blot)

Western blot analysis of SOX2 (arrow) using mouse monoclonal SOX2 antibody. 293 cell lysates (2 ?g/lane) either nontransfected (Lane 1) or transiently transfected with the SOX2 gene (Lane 2) (Origene Technologies



WB (Western Blot)

Western blot analysis of SOX2 Antibody by SOX2 recombinant protein. SOX2(arrow) was detected using the purified Mab.

ADDITIONAL INFORMATION

Related Product Information for anti-SOX2 antibody	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).
Product Categories/Family for anti-SOX2 antibody	Developmental biology ; Neuroscience ; Signal transduction
References	References for protein: 1.Effects of MCF2L2, ADIPOQ and SOX2 genetic polymorphisms on the development of nephropathy in type 1 Diabetes Mellitus. Zhang D, et al. BMC Med Genet, 2010 Jul 28. PMID 20667095. 2.Sox2 protein expression is an independent poor prognostic indicator in stage I lung adenocarcinoma. Sholl LM, et al. Am J Surg Pathol, 2010 Aug. PMID 20631605. 3.Sox2 is translationally activated by eukaryotic initiation factor 4E in human glioma-initiating cells. Ge Y, et al. Biochem Biophys Res Commun, 2010 Jul 9. PMID 20537983. 4.Mutational screening of CHX10, GDF6, OTX2, RAX and SOX2 genes in 50 unrelated microphthalmia-anophthalmia-coloboma (MAC) spectrum cases. Gonzalez-Rodriguez J, et al. Br J Ophthalmol, 2010 Aug. PMID 20494911. 4.Examination of SOX2 in variable ocular conditions identifies a recurrent deletion in microphthalmia and lack of mutations in other phenotypes. Reis LM, et al. Mol Vis, 2010 Apr 28. PMID 20454695. References for SY5Y (SH-SY5Y; #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]. References for MCF7 cell line: 1.Soule, HD; Vazquez J; Long A; Albert S; Brennan M. (1973). "A human cell line from a pleural effusion derived from a breast carcinoma". Journal of the National Cancer Institute 51 (5): 1409-1416. [PMID 4357757]. 2.Levenson, AS; Jordan VC. (1997). "MCF-7: the first hormone-responsive breast cancer cell line". Cancer Research 57 (15): 3071-3078. [PMID 9242427]. 3.Lacroix, M; Leclercq G. (2004). "Relevance of breast cancer cell lines as models for breast tumours: an update". Breast Research and Treatment 83 (3): 249-289.[PMID 14758095].

NCBI AND UNIPROT INFORMATION

NCBI GI #	28195386
NCBI GeneID	6657
NCBI Accession #	NP_003097.1
NCBI GenBank Nucleotide #	NM_003106.3
UniProt Accession #	P48431 ; Q14537
NCBI Official Full Name	transcription factor SOX-2
NCBI Official Synonym Full Names	SRY (sex determining region Y)-box 2
NCBI Official Symbol	SOX2
NCBI Official Synonym Symbols	ANOP3; MCOPS3
NCBI Protein Information	transcription factor SOX-2
UniProt Protein Name	Transcription factor SOX-2
UniProt Gene Name	SOX2
UniProt Entry Name	SOX2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/monoclonal/sox2-antibody-clone-57ct23-3-4-western-blot-immunofluorescence-immunohistochemistry-flow-cytometry-elisa/28642>