OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for AM32707PU-N

Sox17 Mouse Monoclonal Antibody [Clone ID: BC24-3.5CH]

Product data:

Product Type:	Primary Antibodies
Clone Name:	BC24-3.5CH
Applications:	IF, IHC, WB
Recommended Dilution:	**Western Blot:** Use the *BC24-3.5CH* antibody at 2-3 µg/ml in Tris buffered Saline with 0.05% Tween 20 and 5% non-fat dry milk (Blotto) or similar diluents. **Indirect Immunofluorescence.** **Immunohistochemistry:** 3-5 µg/ml. The *BC24-3.5CH* antibody may be used on tissue culture cells grown on chamber slides, cytospins and cryosections. For staining, the cultured cells and cryosections should be fixed in 1-2% paraformaldehyde for 30 mins, permeabilized in 0.25% Triton X 100 in PBS for 30 mins and non-specific binding blocked with 1% BSA in PBS. The primary antibody may be used at 3-5 µg/ml in 1%BSA in PBS. Please note that if used in situ for characterizing Mouse embryos, some background staining may be observed, although this will not detract from the specific staining (See immunoperoxidase staining below). The reflects the presence of Mouse serum immunoglobulin in the sections which are detected by the anti-Mouse Ig secondary antibody. This may be avoided by using directly labeled *3.5CH* without the need for a labeled anti Mouse Ig secondary. This problem should not be observed for embryos of other species. ***Suggested Positive Control Cell Lines:*** TF1-1a (ATCC CRL-2451) hematopoietic cell line and MDCK (NBL-2) (ATCC CCL-34) cell lines. The antibody reacts with a band of approximate molecular size 50kDa.
Reactivity:	Canine, Human, Mouse
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Recombinant SOX17 Mouse protein.
Specificity:	The antibody was tested against Mouse embryonic tissue and Human, Mouse and Dog cell lines. Not tested in other species or in formalin fixed, paraffin embedded (FFPE) tissue. In most cells tested, the staining pattern observed is perinuclear.

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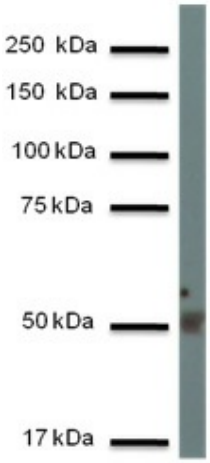
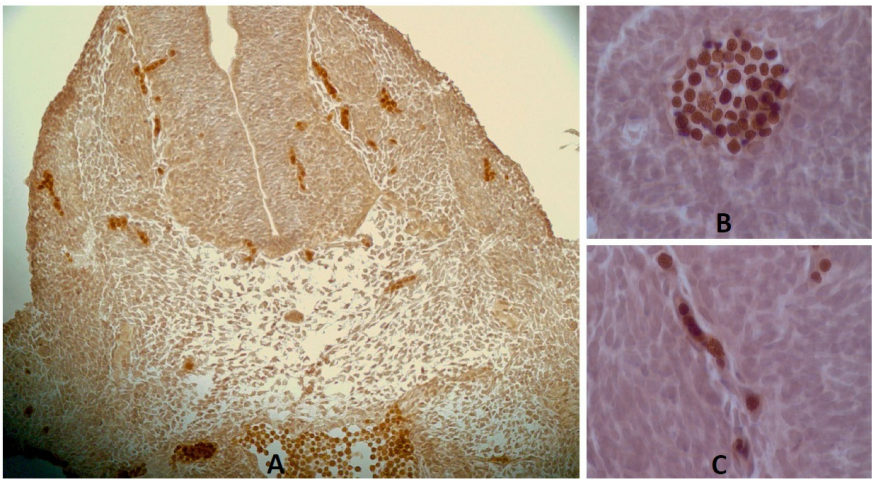
Formulation:	PBS, pH 7.2 State: Purified State: Liquid purified IgG fraction Preservative: 0.05% Sodium Azide
Concentration:	lot specific
Purification:	Protein G Sepharose Chromatography
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	Although the predicted Molecular size of Sox17 is approximately 45 kDa, a higher band of above 50 kDa is observed. It is thought that the high proline content of Sox 17 reduces its electrophoretic mobility thus giving it an apparent higher Molecular weight of above 50 kDa rather than the predicted Molecular size of about 45 kDa.
Gene Name:	SRY (sex determining region Y)-box 17
Database Link:	Entrez Gene 20671 Mouse Q61473
Background:	SOX17 is a member of the SOX (SRY-related HMG-box) family of transcription factors that play important roles in embryonic development and in the determination of the cell fate. The Sox family of proteins contains a high mobility group (HMG) motif that binds the DNA minor groove and are often used as markers to assess the differentiation of specific cell lineages. Whereas the association of Oct 4 with Sox 2 is associated with pluripotent cell fate, the association of Oct 4 with Sox 17 is associated with endodermal cell fate. The expression pattern of Sox 17 is complex. It is expressed in progenitor cells derived from two different germ layers and activates the transcription of key regulator genes for vasculogenesis, hematopoiesis, and erythrocyte differentiation. Sox 17 plays a key role in endoderm formation, cardiac myogenesis, kidney and urinary development and differentiation of oligodendrocytes. The expression of Sox 17 has been used as a marker of lineage or disease in various studies. The overexpression of Sox 17 is thought to promote tumor progression by promoting tumor angiogenesis and vascular abnormalities. Sox 17 expression is associated with gastric cancer progression, whereas SOX2 and SOX17 expression patterns are thought to be useful for distinguishing between seminoma and embryonal carcinoma. Sox17 was shown to be specifically expressed in fetal and neonatal but not adult HSCs. Although Sox 17 was first characterized in embryonal development, it has also been shown to be expressed in some cancers. Our unpublished characterization of the developed antibodies show that the protein is expressed in various types of cancer cell lines and as shown in the previous page, the expression of Sox 17 may be modulated by drugs such as Aphidicolin and Nocadazole that block cells in Go or G2M stage of the cell cycle respectively. That Sox 17 is expressed in the G2M stage of the cell cycle is interesting and warrants further study.
Synonyms:	Transcription factor SOX-17, SRY-box 17, FLJ22252

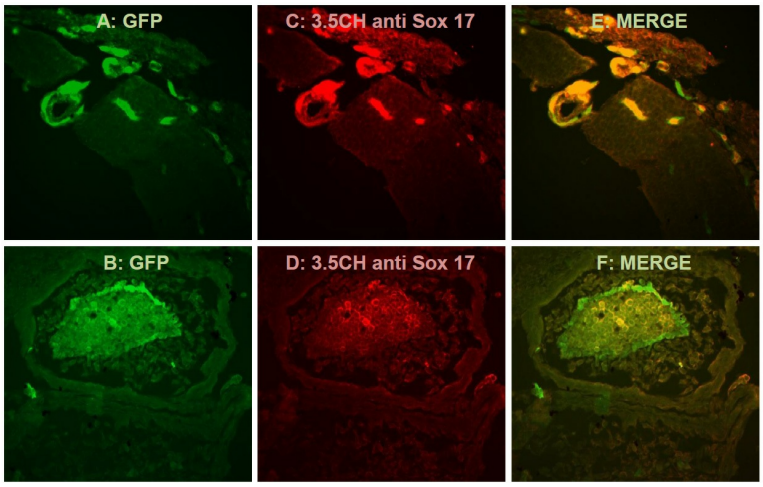
Product images:



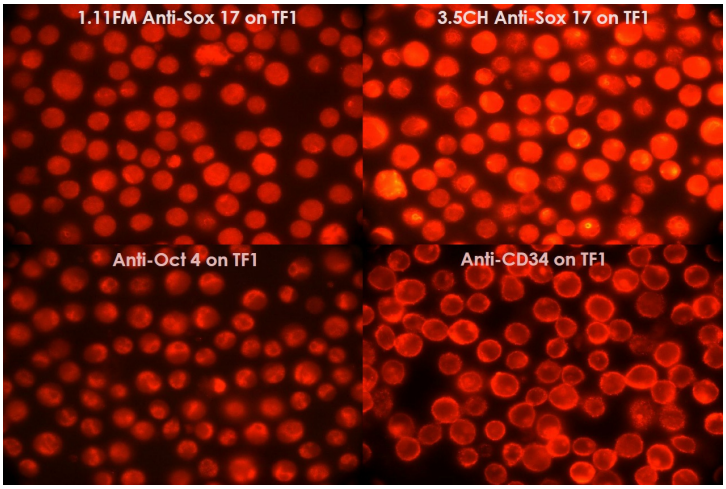
Western blotting with SOX17 Antibody (Clone BC24-3.5CH) used at 2 ug/ml in Blotto on SOX17 MDCK cell lysate loaded at 20ug/lane. Secondary antibody: Peroxidase conjugated rabbit anti-mouse Ig used at 1/20000 dilution in Blotto. Developed by enhanced chemiluminescence.



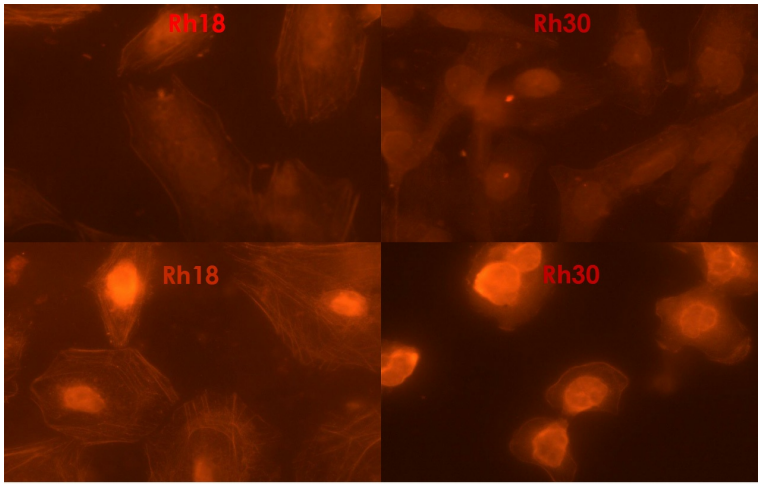
SOX17 Antibody staining of E11.5 SOX17 (GFP/+) heterozygous mouse embryo. A: low, B & C: high magnification. SOX17 expression in gut endoderm and endothelial cells is reflected by the strong staining of these cells. 3.5CH is a mouse monoclonal antibody. The background staining reflects reaction of the secondary anti-mouse Ig antibody with mouse serum Ig. Peroxidase labeled anti-mouse Ig secondary antibody, DAB substrate.



SOX17 Antibody staining of E11.5 SOX17 (GFP/+) heterozygous mouse embryo. SOX17 GFP is expressed in endothelial cells and gut endoderm (A & B). 3.5CH anti-SOX17 antibody staining is shown (C & D). TRITC labeled anti mouse Ig secondary antibody. The merged images (E & F) show co-localization of GFP SOX17 protein and anti SOX17 Antibody. A: GFP B: GFP C: 3.5CH anti SOX17 Antibody D: 3.5CH anti SOX17 Antibody E: MERGE F: MERGE



TF1 hematopoietic stem cell line stained with 1.11FM and 3.5CH anti-SOX17 antibodies. The staining is contrasted with staining for Oct 4 (nuclear) and CD34 (cell surface/membrane) staining. TRITC labeled anti-mouse Ig secondary antibody.



SOX17 Antibody (Clone BC24-3.5CH) staining of Rh18 and Rh30 Cells after treatment with Aphidicolin which blocks in Go (Upper panels) or Nocadazole which blocks in the G2M of the cell cycle (bottom panels). PE anti-mouse Ig labeled secondary antibody.