

SOX9 Recombinant Rabbit mAb

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Catalog # AP94827

Product Information

Application	WB, IHC-P, IHC-F, IF
Reactivity	Human
Host	Rabbit
Clonality	Recombinant
Calculated MW	56 KDa
Physical State	Liquid
Immunogen	A synthesized peptide derived from human SOX9
Epitope Specificity	150-300/509
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS(pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus. Cytoplasm (By similarity). Note=Restricted to the nucleus of Sertoli-like cells in the testis, but localizes to the cytoplasm of previtellogenic oocytes in the ovary before being translocated into the nucleus of vitellogenic oocytes (By similarity).
SIMILARITY	Contains 1 HMG box DNA-binding domain.
SUBUNIT	Interacts with the sumoylation factors ube2i/ubc9 and sumo1.
Post-translational modifications	Sumoylated. Lys-365 is the major site of sumoylation, although sumoylation at Lys-61 also occurs. Sumoylation plays a key role in regulating formation of the neural crest and otic placode.
DISEASE	Defects in SOX9 are the cause of campomelic dysplasia (CMD1) [MIM:114290]. CMD1 is a rare, often lethal, dominantly inherited, congenital osteochondrodysplasia, associated with male-to-female autosomal sex reversal in two-thirds of the affected karyotypic males. A disease of the newborn characterized by congenital bowing and angulation of long bones, unusually small scapulae, deformed pelvis and spine and a missing pair of ribs. Craniofacial defects such as cleft palate, micrognathia, flat face and hypertelorism are common. Various defects of the ear are often evident, affecting the cochlea, malleus incus, stapes and tympanum. Most patients die soon after birth due to respiratory distress which has been attributed to hypoplasia of the tracheobronchial cartilage and small thoracic cage. Defects in SOX9 are the cause of 46,XX sex reversal type 2 (SRXX2) [MIM:278850]. SRXX2 is a condition in which male gonads develop in a genetic female (female to male sex reversal).
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	May be involved in chondrogenesis (cartilage development) during bone formation. Unlikely to play a role in sex determination but may function during testicular and ovarian differentiation (By similarity). Transcriptional activator. Acts early in neural crest formation, functioning redundantly with the other group E Sox factors sox8 and sox10 to induce neural crest progenitors. Induces sox10 expression downstream of wnt-signaling. Principally involved in development of the cranial neural crest, which is fated

to form skeletal elements. Also required for otic placode specification during inner ear development.

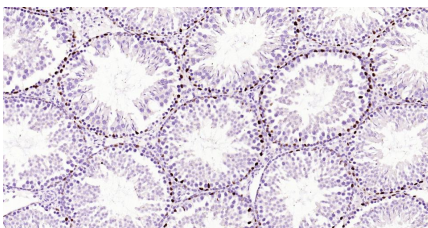
Additional Information

Target/Specificity	From mid-gastrula (stage 10.5-11), expressed in a ring around the blastopore, with expression decreasing toward the dorsal side. At stage 12, expression around the blastopore decreases and begins to increase lateral to the neural plate in the presumptive neural crest, where expression dramatically increases around stage 14. Also expressed in the otic placode as early as stage 13/14. By the tailbud stage expression is restricted to the otic cup and then throughout the otic vesicle, with more intense staining at the dorsal-most region, the prospective region of the semicircular canals and endolymphatic duct. At the early tailbud stage (stage 23), expressed in migrating cranial neural crest cells and in the trunk neural crest. Also expressed in the genital ridges, developing eye, nasal placode and prospective pineal gland. Around stage 25, expression is down-regulated in the trunk neural crest but persists in the migrating cranial crest cells as they populate the pharyngeal arches, otic placode, developing eye, genital ridges and notochord. By stage 31, expression remains strong in the pharyngeal arches. Also expressed in the pancreas; first expressed at stage 25 in the pancreatic anlagen, dorsally in diverticulum. As development proceeds, expression continues in pancreatic tissue, being restricted to ventral and dorsal pancreatic buds.
Dilution	WB=1:500-2000,IHC-P=1:100-500,IF=1:100-500,IHC-F=1:100-500
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	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.

Background

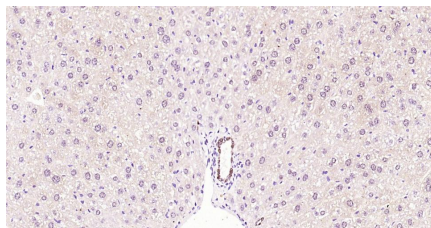
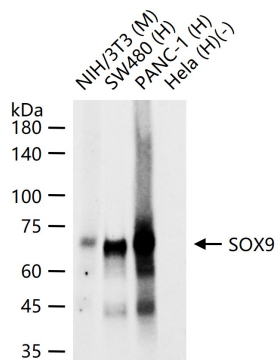
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Images

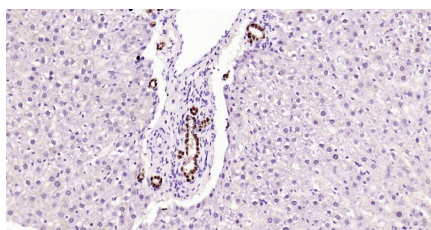


Paraformaldehyde-fixed, paraffin embedded Rat testis; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with SOX9 Monoclonal Antibody, Unconjugated(AP94827) at 1:400 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023)and DAB (C-0010) staining.

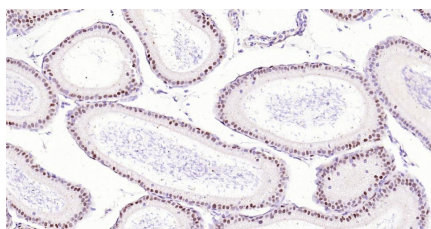
25 ug total protein per lane of various lysates (see on figure) probed with SOX9 monoclonal antibody, unconjugated (AP94827) at 1:2000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



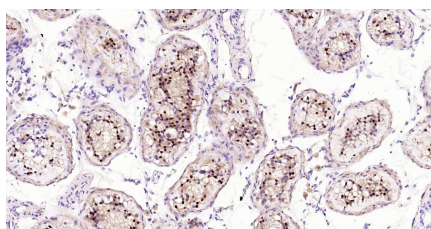
Paraformaldehyde-fixed, paraffin embedded Mouse Liver; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with SOX9 Monoclonal Antibody, Unconjugated(AP94827) at 1:400 overnight at 4°C, followed by conjugation to the bs-0295G-HRP and DAB (C-0010) staining.



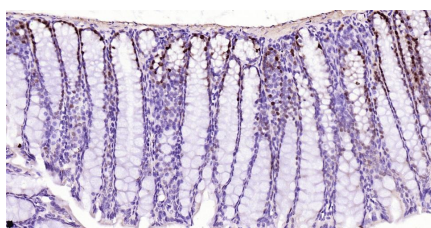
Paraformaldehyde-fixed, paraffin embedded Rat Liver; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with SOX9 Monoclonal Antibody, Unconjugated(AP94827) at 1:400 overnight at 4°C, followed by conjugation to the bs-0295G-HRP and DAB (C-0010) staining.



Paraformaldehyde-fixed, paraffin embedded Mouse Testicles; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with SOX9 Monoclonal Antibody, Unconjugated(AP94827) at 1:400 overnight at 4°C, followed by conjugation to the bs-0295G-HRP and DAB (C-0010) staining.



Paraformaldehyde-fixed, paraffin embedded Human Testicles; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with SOX9 Monoclonal Antibody, Unconjugated(AP94827) at 1:400 overnight at 4°C, followed by conjugation to the bs-0295G-HRP and DAB (C-0010) staining.



Paraformaldehyde-fixed, paraffin embedded Mouse Colon; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with SOX9 Monoclonal Antibody, Unconjugated(AP94827) at 1:400 overnight at 4°C, followed by conjugation to the bs-0295G-HRP and DAB (C-0010) staining.

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