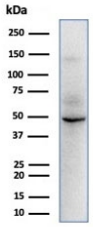
SOX9 Antibody / Transcription factor SOX-9 [clone SOX9/2398] (V7459)

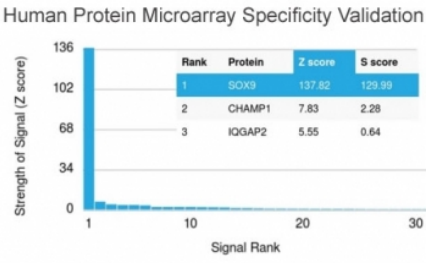
Catalog No.	Formulation	Size
V7459-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7459-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7459SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7459IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

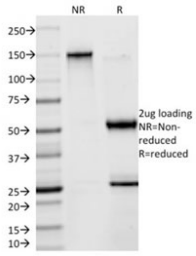
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	SOX9/2398
Purity	Protein G affinity chromatography
UniProt	P48436
Localization	Nuclear
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT Western Blot : 1-2ug/ml
Limitations	This SOX9/Transcription factor SOX-9 antibody is available for research use only.



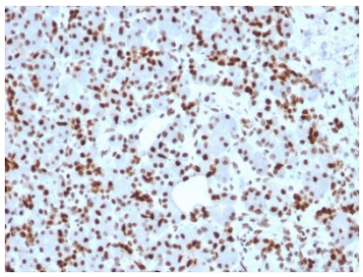
Western blot testing of human HepG2 cell lysate with SOX9/Transcription factor SOX-9 antibody. Predicted molecular weight: 56-65 kDa.



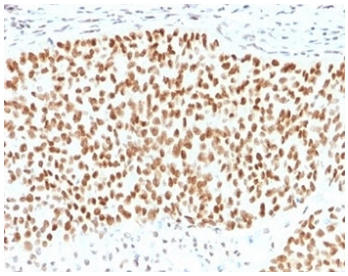
Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using SOX9/Transcription factor SOX-9 antibody. These results demonstrate the foremost specificity of the SOX9/2398 mAb.
Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



SDS-PAGE analysis of purified, BSA-free SOX9/Transcription factor SOX-9 antibody as confirmation of integrity and purity.



Immunohistochemistry analysis of SOX9 / Transcription factor SOX-9 antibody in human pancreas tissue. FFPE human pancreas sections show strong HRP-DAB brown nuclear staining in ductal epithelial cells and scattered epithelial cell populations, consistent with nuclear localization of SOX-9 as a transcription factor. Surrounding acinar cells demonstrate minimal background staining, while stromal elements are largely negative. The staining pattern highlights SOX-9 expression within pancreatic ductal structures and progenitor-associated compartments. Heat induced epitope retrieval was performed in 10 mM Tris with 1 mM EDTA, pH 9.0, by boiling for 10-20 minutes followed by cooling at room temperature for 20 minutes prior to antibody incubation.



IHC staining of FFPE human pancreas with SOX9/Transcription factor SOX-9 antibody. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT for 20 min.

Description

SOX9 Antibody recognizes Transcription factor SOX-9, encoded by the SOX9 gene and commonly referred to as SRY-box 9. SOX-9 is a nuclear transcription factor belonging to the SRY-related HMG-box family and functions as a central regulator of lineage specification and organ development. SOX9 Antibody detects a DNA-binding protein that localizes to the nucleus and directs gene expression programs required for cartilage formation, gonadal differentiation, and epithelial progenitor maintenance.

SOX-9 contains a conserved high mobility group DNA-binding domain that enables sequence-specific binding to regulatory elements and induces bending of target DNA. This structural feature facilitates recruitment of transcriptional co-activators and chromatin remodeling complexes, promoting activation of genes involved in differentiation and morphogenesis. The SOX9 gene is located on chromosome 17 and is tightly regulated during embryogenesis and tissue remodeling.

In skeletal development, SOX-9 is essential for commitment of mesenchymal cells to the chondrocyte lineage. It activates expression of extracellular matrix genes such as collagen type II and aggrecan, supporting cartilage matrix synthesis and growth plate development. Disruption of SOX9 function results in severe skeletal abnormalities, including campomelic dysplasia, underscoring its critical developmental role.

SOX-9 also plays a key role in male sex determination by promoting Sertoli cell differentiation during gonadal development. Beyond embryonic processes, SOX-9 expression persists in epithelial progenitor populations in tissues such as pancreas, bile ducts, lung, and intestine, where it contributes to regeneration and tissue maintenance. In oncology research, SOX9 expression has been associated with tumor cell plasticity and stem-like characteristics in several carcinoma types.

SOX9 Antibody (clone SOX9/2398) is suitable for detecting SOX-9 protein expression in research applications examining development, differentiation, and transcriptional regulation in normal and disease contexts.

Application Notes

Optimal dilution of the SOX9/Transcription factor SOX-9 antibody should be determined by the researcher.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

A portion of amino acids 393-508 from the human protein was used as the immunogen for the SOX9/Transcription factor SOX-9 antibody.

Storage

Store the SOX9/Transcription factor SOX-9 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).