

PRODUCT INFORMATION

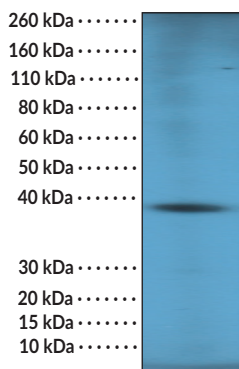
Sox2 (C-Term) Rabbit Monoclonal Antibody (Clone RM427)

Item No. 35319

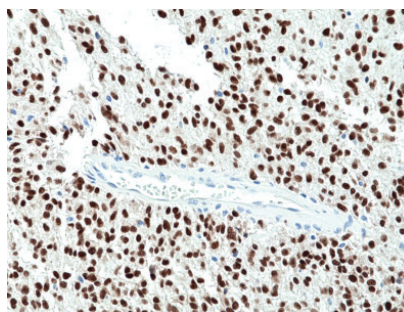
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonym:	Transcription Factor Sox2
Immunogen:	Peptide from the C-terminal region of human Sox2
Cross Reactivity:	(+) Sox2
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Concentration:	100 µl
Clone:	RM427
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:100-1:250 for IHC and 1:100-1:2,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

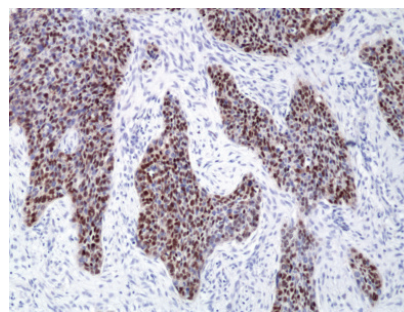
Images



WB of HEK293 cell lysate using Sox2 (C-Term) Rabbit Monoclonal Antibody (Clone RM427) at a 1:1,000 dilution.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human glioblastoma tissue using Sox2 (C-Term) Rabbit Monoclonal Antibody (Clone RM427) at a 1:100 dilution.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human lung squamous cell carcinoma tissue using Sox2 (C-Term) Rabbit Monoclonal Antibody (Clone RM427) at a 1:100 dilution.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Sox2 is a transcription factor and member of the SoxB1 group of Sox proteins.¹ It is composed of an N-terminal domain, an HMG domain responsible for DNA binding, and a C-terminal transactivation domain.² Sox2 is expressed in pluripotent blastocyst cells, ectodermal, endodermal, and mesodermal cells and the tissues derived from them, primordial germ cells, and stem and progenitor cells in adult organisms, including in the neurogenic regions of the adult brain.¹ It is involved in neural commitment, organ specification, hair follicle differentiation, and osteoblast proliferation during development either directly or by indirectly inhibiting other transcriptional regulators. Sox2 is required for the maintenance of neural stem cells (NSCs) in the subgranular zone of the adult hippocampal dentate gyrus.³ It has been used as a reprogramming factor in the generation of induced neural stem cells (iNSC) from fibroblasts and, in combination with the transcription factors Klf4, Oct4, and c-Myc, in the generation of induced pluripotent stem cells (iPSCs) from fibroblasts.¹ Heterozygous mutations for SOX2 are associated with anophthalmia-esophageal-genital (AEG) syndrome, a disorder characterized by anophthalmia or microphthalmia, fistula between the trachea and esophagus, and brain abnormalities.^{1,2} Gene amplification of SOX2 has been found in patients with glioblastoma, lung cancers, sinonasal cancer, and squamous cell carcinomas and is associated with favorable prognosis, relapse, or metastasis depending on the cancer type.² Cayman's Sox2 (C-Term) Rabbit Monoclonal Antibody (Clone RM427) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Sarkar, A. and Hochedlinger, K. The Sox family of transcription factors: Versatile regulators of stem and progenitor cell fate. *Cell Stem Cell* **12(1)**, 15-30 (2013).
2. Weina, K. and Utikal, J. SOX2 and cancer: Current research and its implications in the clinic. *Clin. Transl. Med.* **3**, 19 (2014).
3. Favaro, R., Valotta, M., Ferri, A.L.M., et al. Hippocampal development and neural stem cell maintenance require Sox2-dependent regulation of Shh. *Nat. Neurosci.* **12(10)**, 1248-1256 (2009).

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