Revision 1

Sox9 (D8G8H) Rabbit mAb (PE Conjugate)

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Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-FP	H M	Endogenous	Rabbit IgG	#P48436	6662

Product Usage Information

Application	Dilution
Flow Cytometry (Fixed/Permeabilized)	1:50

Storage

Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity/Sensitivity

Sox9 (D8G9H) Rabbit mAb (PE Conjugate) recognizes endogenous levels of total Sox9 protein.

Species predicted to react based on 100% sequence homology

Rat

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human Sox9 protein.

Description

This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated Sox9 (D8G9H) Rabbit mAb #82630.

Background

Sox9 is a transcription factor with an HMG-box DNA binding domain that has homology to the HMG domain of the mammalian testis-determining factor, SRY (1). Sox9 regulates several important processes during embryonic development including chondrogenesis, during which it contributes to skeletal formation and digit specification (2,3). Sox9 also coordinates with steroidogenic factor-1 to direct Sertoli cell-specific expression of anti-Mullerian hormone during embryogenesis, thereby contributing to male sex determination (4). In addition, Sox9 is reportedly involved in the maintenance of adult stem cell populations, including multipotent neural stem cells (5), hair follicle stem cells (6), and mammary stem cells (7). Recent interest has focused on the role of Sox9 in tumor biology. For example, research studies have shown that Sox9 expression in lung adenocarcinoma induces a mesenchymal phenotype in tumor cells (8). Other research studies have shown that YAP1 induced upregulation of Sox9 confers cancer stem cell like properties on esophageal cancer cells (9). Moreover, Sox9 expression has been linked with several other tumor types including ovarian, prostate, and pancreatic malignancies (10-12).

Background References

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3. Raspopovic, J. et al. (2014) *Science* 345, 566-70.
4. De Santa Barbara, P. et al. (1998) *Mol Cell Biol* 18, 6653-65.
5. Scott, C.E. et al. (2010) *Nat Neurosci* 13, 1181-9.
6. Kadaja, M. et al. (2014) *Genes Dev* 28, 328-41.
7. Guo, W. et al. (2012) *Cell* 148, 1015-28.
8. Capaccione, K.M. et al. (2014) *Oncotarget* 5, 3636-50.
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11. Qin, G.Q. et al. (2014) *Onco Targets Ther* 7, 137-46.
12. Shroff, S. et al. (2014) *Hum Pathol* 45, 456-63.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human **M:** Mouse

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