

Store at
-20C
#96443**PhosphoPlus® Sox2 (Ser250/Ser251)
Antibody Duet****Orders:** 877-616-CELL (2355)
orders@cellsignal.com**Support:** 877-678-TECH (8324)**Web:** info@cellsignal.com
cellsignal.com

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For Research Use Only. Not for Use in Diagnostic Procedures.**UniProt ID:**
#P48431**Entrez-Gene Id:**
6657

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-Sox2 (Ser250/Ser251) (A2I7G) Rabbit mAb	92186	100 µl	35 kDa	Rabbit IgG
Sox2 (D6D9) XP® Rabbit mAb	3579	100 µl	35 kDa	Rabbit

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.**Description**

PhosphoPlus® Duets from Cell Signaling Technology (CST) provide a means to assess protein activation status. Each Duet contains an activation-state and total protein antibody to your target of interest. These antibodies have been carefully selected to provide superior performance in specified applications.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Background

Embryonic stem cells (ESC) derived from the inner cell mass of the blastocyst are unique in their pluripotent capacity and potential for self-renewal (1). Research studies demonstrate that a set of transcription factors that includes Oct-4, Sox2, and Nanog forms a transcriptional network that maintains cells in a pluripotent state (2,3). Chromatin immunoprecipitation experiments show that Sox2 and Oct-4 bind to thousands of gene regulatory sites, many of which regulate cell pluripotency and early embryonic development (4,5). siRNA knockdown of either Sox2 or Oct-4 results in loss of pluripotency (6). Induced overexpression of Oct-4 and Sox2, along with additional transcription factors Klf4 and c-Myc, can reprogram both mouse and human somatic cells to a pluripotent state (7,8). Additional evidence demonstrates that Sox2 is also present in adult multipotent progenitors that give rise to some adult epithelial tissues, including several glands, the glandular stomach, testes, and cervix. Sox2 is thought to regulate target gene expression important for survival and regeneration of these tissues (9).

Phosphorylation on these and other sites on Sox2 have been observed in pluripotent cells as they undergo differentiation, although the mechanism and consequence of this potential regulation is not clear (10).

Background References

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5. Loh, Y.H. et al. (2006) *Nat Genet* 38, 431-40.
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7. Takahashi, K. and Yamanaka, S. (2006) *Cell* 126, 663-76.
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