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#80074

# PhosphoPlus® TAZ (Ser89) Antibody Duet



Cell Signaling  
TECHNOLOGY®

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Entrez-Gene ID #25937  
UniProt ID #Q9GZV5

New 06/20

**For Research Use Only. Not For Use In Diagnostic Procedures.**

Products Included	Product #	Quantity	Mol. Wt.	Isotype
Phospho-TAZ (Ser89) (E1X9C) Rabbit mAb	59971	100 µl	55 kDa	Rabbit IgG
TAZ (E8E9G) Rabbit mAb	83669	100 µl	55 kDa	Rabbit IgG

See [www.cellsignal.com](http://www.cellsignal.com) for individual component applications, species cross-reactivity, dilutions and additional application protocols.

**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 selected from CST's product offering based upon superior performance in specified applications.

**Background:** TAZ is a transcriptional co-activator with a PDZ-binding motif that is regulated by its interaction with 14-3-3 proteins (1). TAZ shares homology with the WW domain of Yes-associated protein (YAP) (1). TAZ is proposed to modulate the switch between proliferation and differentiation of mesenchymal stem cells (MSC) via interaction with transcription factors Runx2 and PPAR $\gamma$ . This process is critical to normal tissue development and the prevention of tumor formation. Due to its role in determination of MSC fate, TAZ may have clinical relevance to several human diseases caused by an imbalance of MSC differentiation (2,3). TAZ is negatively regulated via phosphorylation by LATS1/2, core kinases in the Hippo signaling pathway that controls stem cell development, tissue growth and tumor development (4).

Phosphorylation of TAZ at Ser89 functions to destabilize TAZ protein by promoting 14-3-3 binding, cytoplasmic sequestration, and proteasomal degradation, thereby reducing the ability of TAZ to co-activate transcription of downstream target genes. Mutation of Ser89 to alanine (S89A) yields a constitutively active form of TAZ; expression of TAZ (S89A) in breast cancer cells was shown to promote a cancer stem cell phenotype (5).

**Specificity/Sensitivity:** Phospho-TAZ (Ser89) (E1X9C) Rabbit mAb recognizes endogenous levels of TAZ protein only when phosphorylated at Ser89. Due to sequence similarities near the phosphorylation site, the antibody may also detect endogenous levels of YAP protein when phosphorylated at Ser127. TAZ (E8E9G) Rabbit mAb recognizes endogenous levels of TAZ protein. This antibody does not detect YAP protein.

**Source/Purification:** Phospho-TAZ (Ser89) (E1X9C) Rabbit mAb is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser89 of human TAZ protein. TAZ (E8E9G) Rabbit mAb is produced by immunizing animals with a recombinant protein corresponding to human TAZ protein. The epitope has been mapped to a region surrounding Pro49.

**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 antibodies.

For product specific protocols and a complete listing of recommended companion products please see the product web page at [www.cellsignal.com](http://www.cellsignal.com).

#### Background References:

- (1) Kanai, F. et al. (2000) *EMBO J* 19, 6778-91.
- (2) Hong, J.H. et al. (2005) *Science* 309, 1074-8.
- (3) Hong, J.H. and Yaffe, M.B. (2006) *Cell Cycle* 5, 176-9.
- (4) Lei, Q.Y. et al. (2008) *Mol Cell Biol* 28, 2426-36.
- (5) Cordenonsi, M. et al. (2011) *Cell* 147, 759-72.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.