Revision 3

Store at -20C

#80074

PhosphoPlus® TAZ (Ser89) Antibody Duet

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

UniProt ID:	Entrez-Gene Id:
#Q9GZV5	25937

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

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 selected from CST's product offering based upon 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 antibodies.*

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 PPARγ. 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).

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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