Revision 5

Store at -20C

#59971

Phospho-TAZ (Ser89) (E1X9C) Rabbit mAb

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

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Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IHC-P	H M R	Endogenous	55	Rabbit IgG	#Q9GZV5	25937

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200
Immunohistochemistry (Paraffin)	1:500 - 1:2000

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.

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, this antibody may also detect endogenous levels of YAP protein when phosphorylated at Ser127.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser89 of human TAZ protein.

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 proteosomal 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.

Species Reactivity

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

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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Limited Uses

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