

#8418 Store at -20C

YAP/TAZ (D24E4) Rabbit mAb


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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M Mk	Endogenous	55, 78	Rabbit IgG	#Q9GZV5, #P46937	25937, 10413

Product Usage Information

Application

 Western Blotting
Immunoprecipitation

Dilution

 1:1000
1:50

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

YAP/TAZ (D24E4) Rabbit mAb recognizes endogenous levels of total YAP and TAZ proteins.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp362 of human TAZ protein.

Background

YAP (Yes-associated protein, YAP65) was first identified based on its ability to associate with the SH3 domain of Yes. It also binds to other SH3 domain-containing proteins such as Nck, Crk, Src, and Abl (1). In addition to the SH3 binding motif, YAP contains a PDZ interaction motif, a coiled-coil domain, and WW domains (2-4). While initial studies of YAP all pointed towards a role in anchoring and targeting to specific subcellular compartments, subsequent studies showed that YAP is a transcriptional co-activator by virtue of its WW domain interacting with the PY motif (PPxY) of the transcription factor PEBP2 and other transcription factors (5). In its capacity as a transcriptional co-activator, YAP is now widely recognized as a central mediator of the Hippo Pathway, which plays a fundamental and widely conserved role in regulating tissue growth and organ size (6-8). Phosphorylation at multiple sites (e.g., Ser109, Ser127) by LATS kinases promotes YAP translocation from the nucleus to the cytoplasm, where it is sequestered through association with 14-3-3 proteins (7-9). These LATS-driven phosphorylation events serve to prime YAP for subsequent phosphorylation by CK1δ/ε in an adjacent phosphodegron, triggering proteasomal degradation of YAP (10).

TAZ is a transcriptional co-activator with a PDZ-binding motif that is regulated by its interaction with 14-3-3 proteins (11). TAZ shares homology with the WW domain of Yes-associated protein (YAP) (11). 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 (12,13). 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 (14).

Background References

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6. Dong, J. et al. (2007) *Cell* 130, 1120-33.
7. Zhao, B. et al. (2010) *Genes Dev* 24, 862-74.
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11. Kanai, F. et al. (2000) *EMBO J* 19, 6778-91.
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13. Hong, J.H. and Yaffe, M.B. (2006) *Cell Cycle* 5, 176-9.
14. Lei, Q.Y. et al. (2008) *Mol Cell Biol* 28, 2426-36.

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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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