

YAP (D8H1X) XP[®] Rabbit mAb

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

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Applications: W, W-S, IP, IHC-Bond, IHC-P, IF-F, IF-IC, FC-FP, ChIP, ChIP-seq, C&R	Reactivity: H M R Hm Mk	Sensitivity: Endogenous	MW (kDa): 65-78	Source/Isotype: Rabbit IgG	UniProt ID: #P46937	Entrez-Gene Id: 10413
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Product Usage Information

For optimal ChIP and ChIP-seq results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10⁶ cells) per IP. This antibody has been validated using SimpleChIP[®] Enzymatic Chromatin IP Kits.

The CUT&RUN dilution was determined using CUT&RUN Assay Kit #86652.

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:10 - 1:50
Immunoprecipitation	1:50
IHC Leica Bond	1:100 - 1:400
Immunohistochemistry (Paraffin)	1:200 - 1:800
Immunofluorescence (Frozen)	1:50 - 1:200
Immunofluorescence (Immunocytochemistry)	1:50 - 1:200
Flow Cytometry (Fixed/Permeabilized)	1:50 - 1:200
Chromatin IP	1:50
Chromatin IP-seq	1:50
CUT&RUN	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.

For a carrier free (BSA and azide free) version of this product see product #53921.

Specificity/Sensitivity

YAP (D8H1X) XP[®] Rabbit mAb recognizes endogenous levels of total YAP protein. Non-specific labeling of membrane within fixed frozen mouse small intestine may be observed by immunofluorescence.

Species predicted to react based on 100% sequence homology

Bovine, Horse, Guinea Pig

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the carboxy terminus of human YAP protein. The epitope corresponds to a region surrounding Pro435 of human YAP isoform 1. This sequence region is 100% conserved among all known isoforms of human YAP 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).

Background References

1. Sudol, M. (1994) *Oncogene* 9, 2145-52.
2. Mohler, P.J. et al. (1999) *J Cell Biol* 147, 879-90.
3. Espanel, X. and Sudol, M. (2001) *J Biol Chem* 276, 14514-23.

4. Sudol, M. et al. (1995) *FEBS Lett* 369, 67-71.
 5. Yagi, R. et al. (1999) *EMBO J* 18, 2551-62.
 6. Dong, J. et al. (2007) *Cell* 130, 1120-33.
 7. Zhao, B. et al. (2010) *Genes Dev* 24, 862-74.
 8. Zhao, B. et al. (2007) *Genes Dev* 21, 2747-61.
 9. Yu, F.X. et al. (2012) *Cell* 150, 780-91.
 10. Zhao, B. et al. (2010) *Genes Dev* 24, 72-85.
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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

W: Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation **IHC-Bond:** IHC Leica Bond **IHC-P:** Immunohistochemistry (Paraffin) **IF-F:** Immunofluorescence (Frozen) **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized) **ChIP:** Chromatin IP **ChIP-seq:** Chromatin IP-seq **C&R:** CUT&RUN

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Hm:** Hamster **Mk:** Monkey

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