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KO-Validated Anti-YAP1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI2434

Specification

KO-Validated Anti-YAP1 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	P46937
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 54 kDa; observed, 65 kDa KDa**
Gene Name	**YAP1**
Aliases	**YAP1; Yes1 Associated Transcriptional Regulator; YAP65; YAP-1; Yes-Associated Protein YAP65 Homolog; Transcriptional Coactivator YAP1; Yes Associated Protein 1; Protein Yorkie Homolog; Yes-Associated Protein 1, 65kDa; 65 KDa Yes-Associated Protein; Yes-Associated Protein 2; Yes-Associated Protein 1; Yorkie Homolog; COB1; YAP2; YAP; YKI**
Immunogen	**A synthesized peptide derived from human YAP1**

KO-Validated Anti-YAP1 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**10413**

Other Names
Transcriptional coactivator YAP1, Yes-associated protein 1, Protein yorkie homolog, Yes-associated protein YAP65 homolog, YAP1 (HGNC:16262), YAP65

KO-Validated Anti-YAP1 Rabbit Monoclonal Antibody - Protein Information

Name YAP1 (HGNC:16262)

Synonyms YAP65

Function
Transcriptional regulator with dual roles as a coactivator and corepressor. Critical downstream regulatory target in the Hippo signaling pathway, crucial for organ size control and tumor suppression by restricting proliferation and promoting apoptosis (PubMed:17974916, PubMed:18280240, PubMed:18579750, PubMed:21364637, PubMed:<a

href="http://www.uniprot.org/citations/30447097" target="_blank">30447097). The Hippo signaling pathway core involves a kinase cascade featuring STK3/MST2 and STK4/MST1, along with its regulatory partner SAV1, which phosphorylates and activates LATS1/2 in complex with their regulatory protein, MOB1. This activation leads to the phosphorylation and inactivation of the YAP1 oncoprotein and WWTR1/TAZ (PubMed:18158288). Phosphorylation of YAP1 by LATS1/2 prevents its nuclear translocation, thereby regulating the expression of its target genes (PubMed:18158288, PubMed:26598551, PubMed:34404733). The transcriptional regulation of gene expression requires TEAD transcription factors and modulates cell growth, anchorage-independent growth, and induction of epithelial- mesenchymal transition (EMT) (PubMed:18579750). Plays a key role in tissue tension and 3D tissue shape by regulating the cortical actomyosin network, acting via ARHGAP18, a Rho GTPase activating protein that suppresses F-actin polymerization (PubMed:25778702). It also suppresses ciliogenesis by acting as a transcriptional corepressor of TEAD4 target genes AURKA and PLK1 (PubMed:25849865). In conjunction with WWTR1, regulates TGFB1-dependent SMAD2 and SMAD3 nuclear accumulation (By similarity). Synergizes with WBP2 to enhance PGR activity (PubMed:16772533).

Cellular Location

Cytoplasm. Nucleus. Cell junction, tight junction {ECO:0000250|UniProtKB:A0A8C0NGY6}. Cell membrane. Note=Both phosphorylation and cell density can regulate its subcellular localization (PubMed:18158288, PubMed:20048001). Phosphorylation sequesters it in the cytoplasm by inhibiting its translocation into the nucleus (PubMed:18158288, PubMed:20048001, PubMed:34404733). At low density, predominantly nuclear and is translocated to the cytoplasm at high density (PubMed:18158288, PubMed:20048001, PubMed:25849865). PTPN14 induces translocation from the nucleus to the cytoplasm (PubMed:22525271). In the nucleus, phosphorylation by PRP4K induces nuclear exclusion (PubMed:29695716). Localized mainly to the nucleus in the early stages of embryo development with expression becoming evident in the cytoplasm at the blastocyst and epiblast stages (By similarity) Localizes to the cytoplasm and tight junctions following interaction with AMOT isoform 1 (PubMed:21205866). Localizes to tight junctions following interaction with AMOTL2 (By similarity). Translocates to the nucleus in the presence of SNAIL1 (By similarity). Found at the cell membrane in keratinocytes in response to mechanical strain (PubMed:31835537). {ECO:0000250|UniProtKB:A0A8C0NGY6, ECO:0000250|UniProtKB:P46938, ECO:0000269|PubMed:18158288, ECO:0000269|PubMed:20048001, ECO:0000269|PubMed:21205866, ECO:0000269|PubMed:22525271, ECO:0000269|PubMed:25849865, ECO:0000269|PubMed:29695716, ECO:0000269|PubMed:31835537, ECO:0000269|PubMed:34404733}

Tissue Location

Increased expression seen in some liver and prostate cancers. Isoforms lacking the transactivation domain found in striatal neurons of patients with Huntington disease (at protein level).

KO-Validated Anti-YAP1 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides

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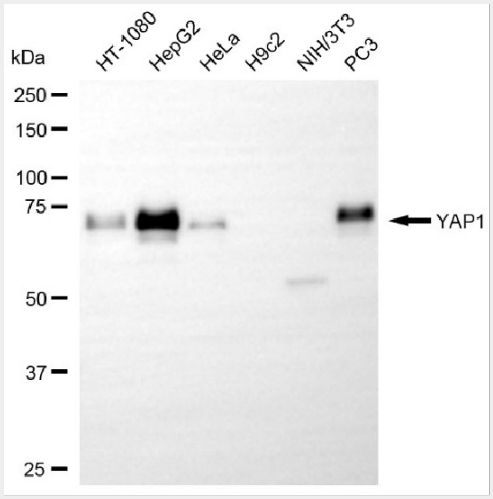
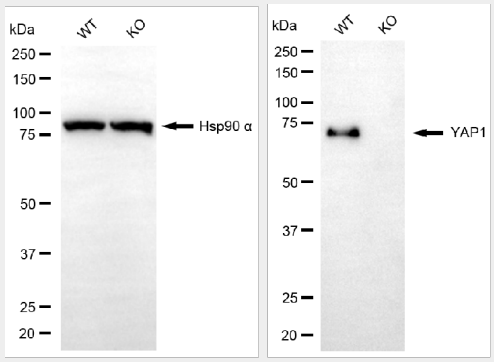
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KO-Validated Anti-YAP1 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-YAP1 antibody (Cat#AGI2434). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-YAP1 antibody (Cat#AGI2434, 1:10,000) and HRP-conjugated goat anti rabbit secondary antibody respectively.



Western blotting analysis using anti-YAP1 antibody (Cat#AGI2434). YAP1 expression in wild type (WT) and YAP1 knockout (KO) HSHC cells with 40 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-YAP1 antibody (Cat#AGI2434, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.

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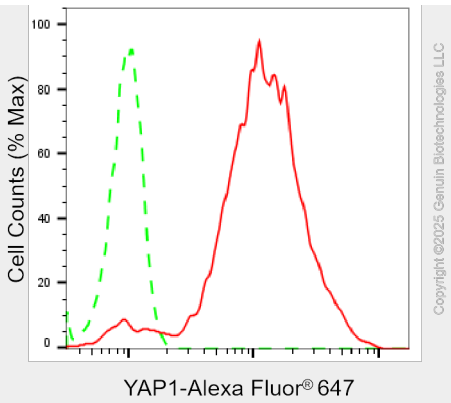
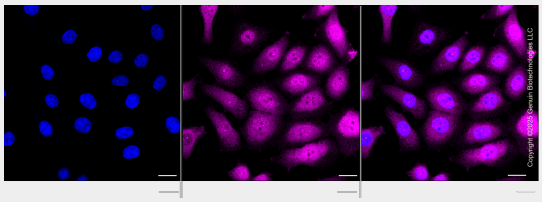


Flow cytometric analysis of YAP1 expression in HepG2 cells using anti-YAP1 antibody (Cat#AGI2434, 1:2,000). Green, isotype control; red, YAP1.



Immunocytochemical staining of HepG2 cells with YAP1 antibody (Cat#AGI2434, 1:1,000). Nuclei were stained blue with DAPI; YAP1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar, 20 µm.