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YAP1 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1673a

Specification

YAP1 Antibody - Product Information

Application	**E, WB, IHC, FC**
Primary Accession	P46937
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**

Description
This gene encodes the human ortholog of chicken YAP protein which binds to the SH3 domain of the Yes proto-oncogene product. This protein contains a WW domain that is found in various structural, regulatory and signaling molecules in yeast, nematode, and mammals, and may be involved in protein-protein interaction.

Immunogen
Purified recombinant fragment of human YAP1 expressed in E. Coli.

Formulation
Purified antibody in PBS with 0.05% sodium azide

YAP1 Antibody - Additional Information

Gene ID 10413

Other Names
Transcriptional coactivator YAP1, Yes-associated protein 1, Protein yorkie homolog, Yes-associated protein YAP65 homolog, YAP1, YAP65

Dilution
E~~1/10000
WB~~1/500 - 1/2000
IHC~~1/200 - 1/1000
FC~~1/200 - 1/400

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
YAP1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

YAP1 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: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). 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 {ECO:0000250|UniProtKB:P46938}. 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). 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) {ECO:0000250|UniProtKB:P46938, ECO:0000269|PubMed:18158288, ECO:0000269|PubMed:20048001, ECO:0000269|PubMed:22525271, ECO:0000269|PubMed:25849865, ECO:0000269|PubMed:29695716}

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).

YAP1 Antibody - Protocols

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

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- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

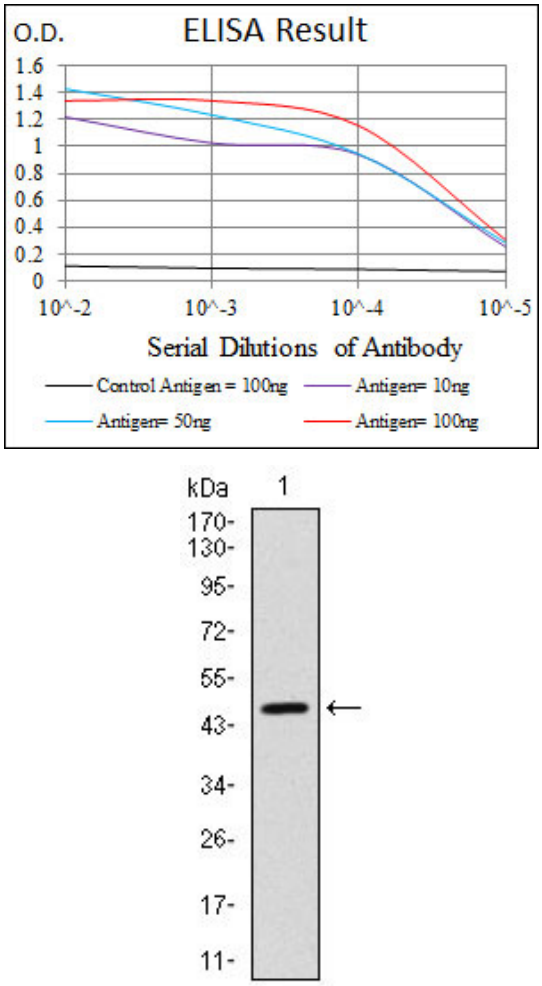

Figure 1: Western blot analysis using YAP1 mAb against human YAP1 (AA: 250-447) recombinant protein. (Expected MW is 54.4 kDa)

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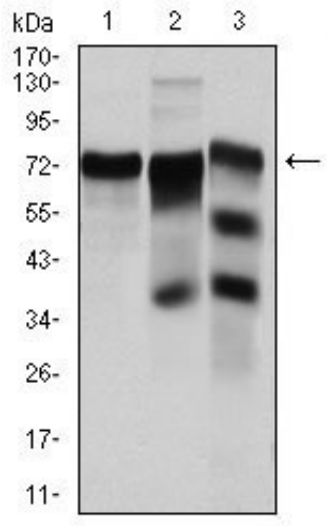

Figure 2: Western blot analysis using YAP1 mouse mAb against Hela (1), C6 (2) and Cos7 (3) cell lysate.

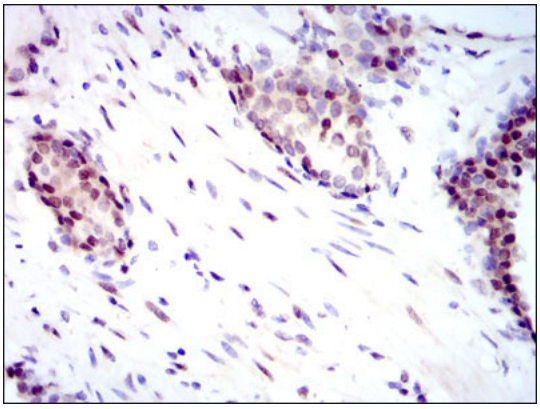

Figure 3: Immunohistochemical analysis of paraffin-embedded prostate cancer tissues using YAP1 mouse mAb with DAB staining.

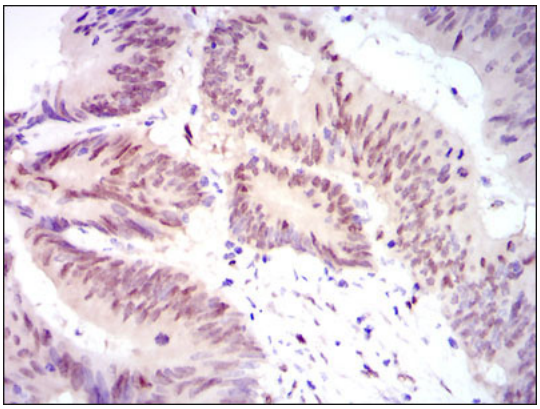

Figure 4: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using YAP1 mouse mAb with DAB staining.

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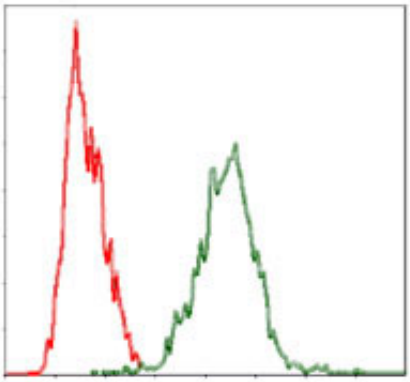

Figure 5: Flow cytometric analysis of Hela cells using YAP1 mouse mAb (green) and negative control (red).

YAP1 Antibody - References

1. Genes Dev. 2009 Dec 1;23(23):2729-41. 2. Nat Cell Biol. 2009 Dec;11(12):1444-50.