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Product Information

Anti-phospho-YAP1 (pTyr^{357}) antibody
Mouse monoclonal, Clone PYP-76
purified from hybridoma cell culture

Product Number **Y0771**

Product Description

Monoclonal Anti-phospho-YAP1 (pTyr^{357}) (mouse IgM isotype) is derived from the hybridoma PYP-76 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a synthetic phosphopeptide corresponding to a fragment containing (pTyr^{357}) of human YAP1 (GeneID: 10413) conjugated to KLH**.** The sequence is identical in chicken YAP1 and highly conserved in mouse YAP1 (single amino acid substitution). The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2.

Monoclonal Anti-phospho-YAP1 (pTyr^{357}) recognizes human phosphorylated YAP1 (pTyr^{357}). The antibody is predicted to react with chicken and mouse phosphorylated YAP1 (pTyr^{357}). The antibody may be used in various immunochemical techniques including ELISA, immunoblotting (~65 kDa), and immunofluorescence. Staining of the phospho-YAP1 (pTyr^{357}) band in immunoblotting is specifically inhibited by the immunizing peptide. No inhibition with the unmodified peptide is observed.

Yes-associated protein 1 (YAP1) is a modular adapter protein with multiple protein interaction domains that was originally identified based on its interaction with the Src-family tyrosine kinase c-Yes.[1] YAP1 plays an important role as a transcription co-activator in regulating gene expression through direct association with a wide range of transcription factors, including Runx2 and PPARγ.[2] In addition to a SH3-binding motif, YAP1 contains a proline-rich amino terminus, a WW domain, a coiled-coil,and a PDZ-binding motif at the extreme C-terminus.[3-5] YAP1 binds to p73 through its WW domain and the PPPY motif of p73. This interaction is required for the ability of YAP1 to co-activate p73-responsive genes.[6] YAP1 has been reported to be phosphorylated by c-Abl tyrosine kinase at Tyr^{357}.[7]

In response to DNA damage YAP1 translocates to the nucleus in a p73-dependent manner. In the nucleus, YAP1 promotes p73-dependent apoptosis through the specific and selective co-activation of p53AIP1, an apoptotic p73 target gene.[2] YAP1 has been shown to stabilize p73 by preventing Itch-mediated ubiquitination of p73.[8]

YAP1 also contains a 14-3-3 interacting motif. Upon phosphorylation by Akt at Ser^{127}, 14-3-3 is recruited and promotes YAP1 localization to the cytoplasm, resulting in loss of co-activator function in the nucleus.[9] Inhibition of Akt potentiates the nuclear re-localization of YAP1 to induce apoptosis by p73.[10]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze at –20 °C in working aliquots. Repeated freezing and thawing, or storage in “frost-free” freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.5–1 μg/mL is recommended using total cell extract of HEK-293T cells co-transfected with wt YAP and a constitutively active mutant of c-Abl (Δ1-81).

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

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VS,GG,ER,KAA,PHC,MAM 01/19-1