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# phospho-PPM1A (Ser375) Rabbit pAb

Catalog # AP97713

## Product Information

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| **Application** | IHC-P, IHC-F, IF |
| **Primary Accession** | P35813 |
| **Other Accession** | P35813 |
| **Reactivity** | Human |
| **Predicted** | Dog, Sheep |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 42448 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated Synthesised phosphopeptide derived from human PPM1A around the phosphorylation site of Ser375 |
| **Epitope Specificity** | TD(p-S)TS |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SIMILARITY** | Belongs to the PP2C family. |
| **SUBUNIT** | Monomer. Interacts with SMAD2; the interaction dephosphorylates SMAD2 in its C-terminal SXS motif resulting in disruption of the SMAD2/SMAD4 complex, SMAD2 nuclear export and termination of the TGF-beta-mediated signaling. Interacts with SMAD2; the interaction dephosphorylates SMAD2 in its C-terminal SXS motif resulting in disruption of the SMAD2/SMAD4 complex, SMAD2 nuclear export and termination of the TGF-beta-mediated signaling. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | The protein encoded by this gene is a member of the PP2C family of Ser/Thr protein phosphatases. PP2C family members are known to be negative regulators of cell stress response pathways. This phosphatase dephosphorylates, and negatively regulates the activities of, MAP kinases and MAP kinase kinases. It has been shown to inhibit the activation of p38 and JNK kinase cascades induced by environmental stresses. This phosphatase can also dephosphorylate cyclin-dependent kinases, and thus may be involved in cell cycle control. Overexpression of this phosphatase is reported to activate the expression of the tumor suppressor gene TP53/p53, which leads to G2/M cell cycle arrest and apoptosis. Three alternatively spliced transcript variants encoding distinct isoforms have been described. [provided by RefSeq, Jul 2008]. |

## Additional Information

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| **Gene ID** | 5494 |
| **Other Names** | PP2C-ALPHA; PP2CA; PP2Calpha; 2310003C21Rik; 2900017D14Rik; MMPa-2; MPPa-1; PPM1A_HUMAN; PPM1A; Protein phosphatase 2C isoform alpha |

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| | (PP2C-alpha); Protein phosphatase IA; 3.1.3.16; PPPM1A; PPM1A_MOUSE; protein phosphatase, Mg2+/Mn2+ dependent 1A; protein phosphatase 1A (formerly 2C), magnesium-dependent, alpha isoform; protein phosphatase, Mg2+/Mn2+ dependent, 1A; phosphatase 2C alpha; protein phosphatase 2C, alpha isoform; PPM1A (phospho-S375); p-PPM1A; phospho-PPM1A; PPM1A (phospho-Ser375) |
| **Dilution** | IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,Flow-Cyt=1ug/Test |
| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| **Name** | PPM1A |
| **Synonyms** | PPPM1A |
| **Function** | Enzyme with a broad specificity. Negatively regulates TGF- beta signaling through dephosphorylating SMAD2 and SMAD3, resulting in their dissociation from SMAD4, nuclear export of the SMADs and termination of the TGF-beta-mediated signaling. Dephosphorylates PRKAA1 and PRKAA2. Plays an important role in the termination of TNF-mediated NF-kappa-B activation through dephosphorylating and inactivating IKBKB/IKKB. |
| **Cellular Location** | Nucleus. Cytoplasm, cytosol. Membrane; Lipid- anchor Note=Weakly associates at the membrane and N-myristoylation mediates the membrane localization. {ECO:0000250\|UniProtKB:P49443} |

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