For Research Use Only. Not for Use in Diagnostic Procedures.

**Applications:** WB, IP, IHC-P, IF-IC, FC-FP

**Reactivity:** H M R Mk Dm

**Sensitivity:** Endogenous

**MW (kDa):** 36, 38

**Source:** Rabbit

**UniProt ID:** #P67775

**Entrez-Gene Id:** 5515

### Product Usage Information

<table>
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<tr>
<th>Application</th>
<th>Dilution</th>
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<tr>
<td>Western Blotting</td>
<td>1:1000</td>
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<tr>
<td>Immunoprecipitation</td>
<td>1:100</td>
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<tr>
<td>Immunohistochemistry (Paraffin)</td>
<td>1:100</td>
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<tr>
<td>Immunofluorescence (Immunocytochemistry)</td>
<td>1:50</td>
</tr>
<tr>
<td>Flow Cytometry (Fixed/Permeabilized)</td>
<td>1:100</td>
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</table>

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

### Specificity / Sensitivity

This antibody detects endogenous levels of PP2A catalytic subunit protein (both α and β isoforms). The antibody does not cross-react with other PP2A subunits.

### Species predicted to react based on 100% sequence homology

Chicken, Pig

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino acids at the carboxy terminus of human PP2A catalytic subunit. Antibodies are purified by protein A and peptide affinity chromatography.

### Background

Protein phosphatase type 2A (PP2A) is an essential protein serine/threonine phosphatase that is conserved in all eukaryotes. PP2A is a key enzyme within various signal transduction pathways as it regulates fundamental cellular activities such as DNA replication, transcription, translation, metabolism, cell cycle progression, cell division, apoptosis and development (1-3). The core enzyme consists of catalytic C and regulatory A (or PR65) subunits, with each subunit represented by α and β isoforms (1). Additional regulatory subunits belong to four different families of unrelated proteins. Both the B (or PR55) and B' regulatory protein families contain α, β, γ and δ isoforms, with the B' family also including an ε protein. B" family proteins include PR72, PR130, PR59 and PR48 isoforms, while striatin (PR110) and SG2NA (PR93) are both members of the B" regulatory protein family. These B subunits competitively bind to a shared binding site on the core A subunit (1). This variable array of holoenzyme components, particularly regulatory B subunits, allows PP2A to act in a diverse set of functions. PP2A function is regulated by expression, localization, holoenzyme composition and post-translational modification. Phosphorylation of PP2A at Tyr307 by Src occurs in response to EGF or insulin and results in a substantial reduction of PP2A activity (4). Reversible methylation on the carboxyl group of Leu309 of PP2A has been observed (5-6). Methylation alters the conformation of PP2A, as well as its localization and association with B regulatory subunits (6-8).

### Background References

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

- **WB**: Western Blotting
- **IP**: Immunoprecipitation
- **IHC-P**: Immunohistochemistry (Paraffin)
- **IF-IC**: Immunofluorescence (Immunocytochemistry)
- **FC-FP**: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

- **H**: human
- **M**: mouse
- **R**: rat
- **Hm**: hamster
- **Mk**: monkey
- **Vir**: virus
- **Mi**: mink
- **C**: chicken
- **Dm**: D. melanogaster
- **X**: Xenopus
- **Z**: zebrafish
- **B**: bovine
- **Dg**: dog
- **Pg**: pig
- **Sc**: S. cerevisiae
- **Ce**: C. elegans
- **Hr**: horse
- **GP**: Guinea Pig
- **Rab**: rabbit
- **All**: all species expected

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