

PP2A B Subunit Antibody



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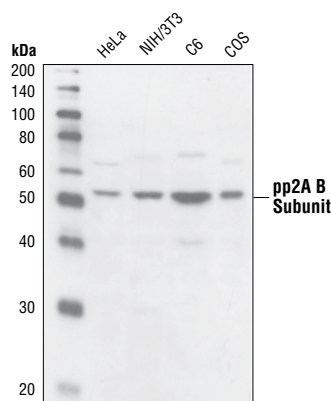
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Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP, IHC-P, IF-IC, F Endogenous	H, M, R, Mk, (C)	52 kDa	Rabbit**

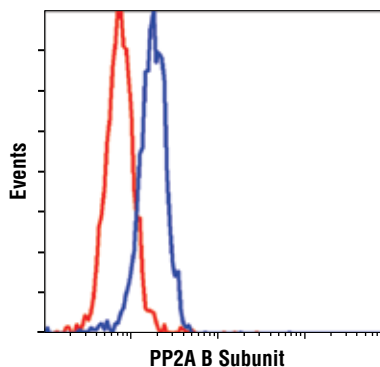
Background: Protein phosphatase type 2A (PP2A) is an essential protein serine/threonine phosphatase that is conserved in all eukaryotes. PP2A is a key enzyme within various signal transduction pathways as it regulates fundamental cellular activities such as DNA replication, transcription, translation, 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).

Specificity/Sensitivity: PP2A B Subunit Antibody detects endogenous levels of the PR55 PP2A B subunit (α isoform). The antibody may also recognize the β , γ , and δ isoforms of the PR55 PP2A B subunit. This antibody does not cross-react with the B-prime (PR61), B-prime-prime, or B-prime-prime-prime families of PP2A B subunits.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino acids near the amino terminus of human PP2A B subunit. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from HeLa, NIH/3T3, C6 and COS cells using PP2A B Subunit Antibody.



Flow cytometric analysis of NIH/3T3 cells using PP2A B Subunit Antibody (blue) compared to a nonspecific negative control antibody (red).

Entrez-Gene ID #5520
UniProt ID #P63151

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

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western Blotting	1:1000
Immunoprecipitation	1:100
Immunohistochemistry (Paraffin)	1:150†
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114
†Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.	
Immunofluorescence (IF-IC)	1:100
Flow Cytometry	1:100

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com

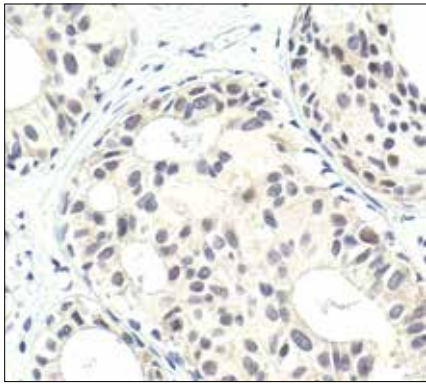
Background References:

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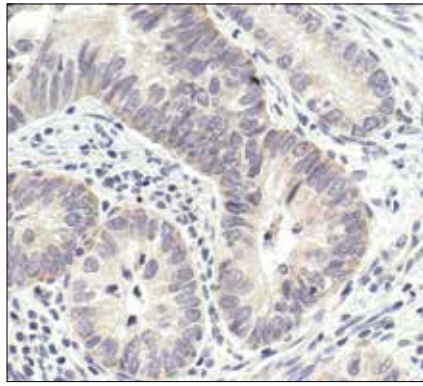
IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

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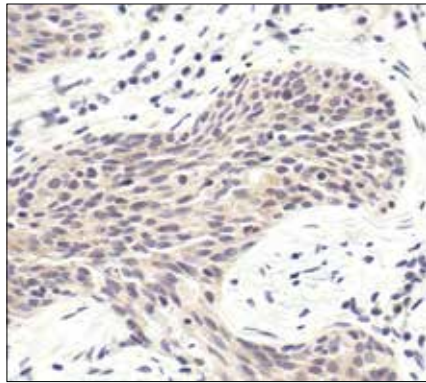
Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



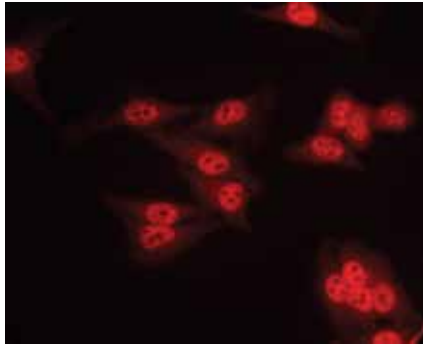
Immunohistochemical analysis of paraffin-embedded human breast carcinoma using PP2A B Subunit Antibody.



Immunohistochemical analysis of paraffin-embedded human colon carcinoma using PP2A B Subunit Antibody.



Immunohistochemical analysis of paraffin-embedded human lung carcinoma using PP2A B Subunit Antibody.



Immunofluorescent analysis of paraformaldehyde fixed HeLa cells using PP2A B Subunit Antibody.