

PP2A A Subunit Antibody

✓ 100 µl
(10 western blots)

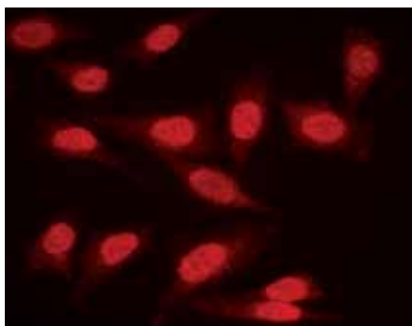
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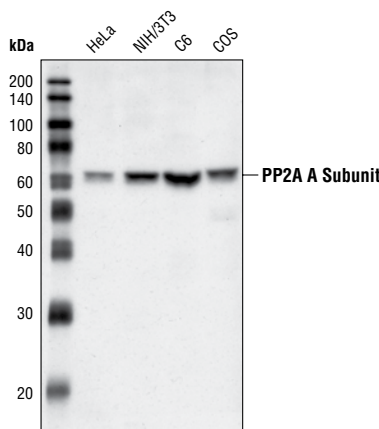
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IF-IC, F Endogenous	H, M, R, Mm, Dr	62 kDa	Rabbit**

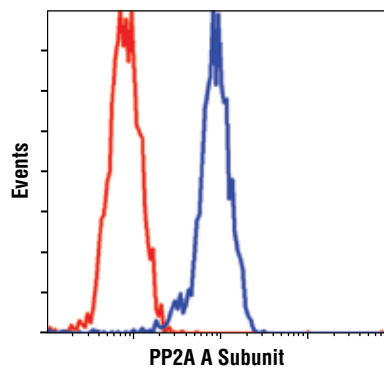
Background: Protein phosphatase type 2A (PP2A) is an essential protein serine/threonine phosphatase that is conserved in all eukaryotes. PP2A is a key enzyme within various signal transduction pathways as it regulates fundamental cellular activities such as DNA replication, transcription, translation,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



Immunofluorescent staining of paraformaldehyde fixed HeLa cells, using PP2A A Subunit Antibody.



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



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

Specificity/Sensitivity: This antibody detects endogenous levels of PP2A A subunit, both a and b isoforms. The antibody does not cross-react with other PP2A subunits.

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

Entrez-Gene ID #P30153
Swiss-Prot Acc. #5518

Storage: Supplied in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg/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
Immunofluorescence (IF-IC)	1:50
Flow Cytometry	1:100

For application specific protocols please see the web page for this product at www.cellsignaling.com.

Please visit www.cellsignaling.com for a complete listing of recommended companion products.

Background References:

- (1) Janssens, V. and Goris, J. (2001) *Biochem. J.* 353, 417-439.
- (2) Zolnierowicz, S. (2000) *Biochem. Pharmacol.* 60, 1225-1235.
- (3) Milward, T.A. et al. (1999) *Trends Biochem. Sci.* 24, 186-191.
- (4) Chen, J. et al. (1992) *Science* 257, 1261-1264.
- (5) Turowski, P. et al. (1995) *J. Cell. Biol.* 129, 397-410.
- (6) Lee, J. et al. (1996) *Proc. Natl. Acad. Sci. USA* 93, 6043-6047.
- (7) Tolstykh, T. et al. (2000) *EMBO J.* 19, 5682-5691.
- (8) Yu, X.X. et al. (2001) *Mol. Biol. Cell* 12, 185-199.

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.