Qty: 100 µL

Rabbit anti-PP2A C Subunit

Catalog No. 40-6001

Lot No.

Rabbit anti-PP2A C Subunit

FORM
This polyclonal antibody is supplied as a 100 µL aliquot of neat antiserum containing 0.1% sodium azide

PAD: ZMD.480 (R2)

IMMUNOGEN
Bacterically expressed deletion mutant of human PP2A (protein phosphastase type 2A) C (catalytic), lacking amino acids 17-87

SPECIFICITY
This antibody is specific for the human PP2A C subunit, independent of methylation status. On Western blots, it identifies the target band at ~36 kDa. This antibody may cross-react to a small degree with PP4, a related phosphatase.

REACTIVITY
Reactivity has been confirmed with NIH 3T3 and HeLa cell lysates. Based on amino acid sequence homology, reactivity with monkey and rat may also be observed.

Sample	Western Blotting	Immuno-precipitation (native)	Immuno-fluorescence
Human	+++	+++	0
Mouse	+++	+++	0
Sf9	+++	ND	ND
Drosophila	+++	ND	ND
Xenopus	+++	ND	ND
Monkey	ND	ND	ND
Rat	ND	ND	ND

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE
Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western Blotting: 1:1,000
Immunoprecipitation: 1:200

STORAGE
Store at 2-8°C for up to one month. Store at –20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

BACKGROUND

Protein phosphatase type 2A (PP2A) is a major eukaryotic serine/threonine protein phosphatase (PPase). PP2A is highly conserved and often exist as a heterotrimeric enzyme composed of a catalytic (C) subunit, a structural (A) subunit, and a variable regulatory/targeting (B-type) subunit[1]. Recent studies show that PP2A plays important roles in cell cycle regulation, signal transduction, cell differentiation, and transformation[1-3]. Its activity is also related to several diseases, including neurodegenerative diseases and cancer.

PP2A is composed of a 36 kDa catalytic subunit (PP2A C subunit) tightly bound to the 65 kDa regulatory PR65/A constant unit (PP2A A subunit). These two associated proteins form the core dimer which is able to further interact with a third variable subunit (PP2A B subunit) or other regulatory proteins[2].

The PP2A C subunit is present in two isoforms, α and β, which share 97% identity in their primary sequences. The structure of the PP2A C subunit is highly conserved. All PP2A C subunit sequences identified to date have a T^{304} PDYFL^{309} motif at their C-terminus. This motif not only contains Tyr^{307}, but also is the recognition site for carboxymethylation by a specific carboxyl methyltransferase. Current studies demonstrate that phosphorylation and/or methylation on PP2A C subunit results in changing its phosphatase activity and/or its catalytic activity[3]. Therefore, the catalytic subunit of PP2A may play a regulatory role on functional aspects of PP2A.

REFERENCES

1. Huijun W, et al. *J Biol Chem* 276:1570-1577, 2001.
2. Janssens V, et al. *J Biochem* 353:417-439, 2001.
3. Lechward K, et al. *Acta Biochem Pol* 48:921-923, 2001.

RELATED PRODUCTS

Product	*Conjugate*	*Cat. No.*
Mouse anti-Unmethylated PP2A C Subunit		39-2201
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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