

Product datasheet

Anti-PP2A alpha + beta antibody [Y119] ab32141

Recombinant RabMAb

★★★★☆ 5 Abreviews 16 References 3 Images

Overview

Product name	Anti-PP2A alpha + beta antibody [Y119]
Description	Rabbit monoclonal [Y119] to PP2A alpha + beta
Host species	Rabbit
Specificity	This antibody detects both alpha and beta isoforms of PP2A.
Tested applications	Suitable for: WB, IHC-P, ICC, IP, Flow Cyt
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide within Human PP2A alpha + beta (C terminal). The exact sequence is proprietary.
Epitope	ab32141 reacts with an epitope located in the C terminal region of PP2A alpha and beta
Positive control	T47-D cell lysate and human breast carcinoma
General notes	Our RabMAb [®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents . This product is a recombinant rabbit monoclonal antibody .

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 49% PBS, 50% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	Y119
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab32141** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★	1/5000 - 1/10000. Detects a band of approximately 36 kDa (predicted molecular weight: 35 kDa).
IHC-P		1/250 - 1/500.
ICC		1/50.
IP	★★★★★	1/100.
Flow Cyt		1/20.

Target

Function

PP2A can modulate the activity of phosphorylase B kinase casein kinase 2, mitogen-stimulated S6 kinase, and MAP-2 kinase. Cooperates with SGOL2 to protect centromeric cohesin from separase-mediated cleavage in oocytes specifically during meiosis I (By similarity). Can dephosphorylate SV40 large T antigen and p53/TP53. Dephosphorylates SV40 large T antigen, preferentially on serine residues 120, 123, 677, and perhaps 679. The C subunit was most active, followed by the AC form, which was more active than the ABC form, and activity of all three forms was strongly stimulated by manganese, and to a lesser extent by magnesium. Dephosphorylation by the AC form, but not C or ABC form is inhibited by small T antigen. Activates RAF1 by dephosphorylating it at 'Ser-259'.

Sequence similarities

Belongs to the PPP phosphatase family. PP-1 subfamily.

Post-translational modifications

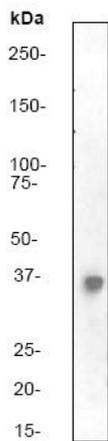
Reversibly methyl esterified on Leu-309. Carboxyl methylation may play a role in holoenzyme assembly, enhancing the affinity of the PP2A core enzyme for some, but not all, regulatory subunits. It varies during the cell cycle.

Phosphorylation of either threonine (by autophosphorylation-activated protein kinase) or tyrosine results in inactivation of the phosphatase. Auto-dephosphorylation has been suggested as a mechanism for reactivation.

Cellular localization

Cytoplasm. Nucleus. Chromosome > centromere. Cytoplasm > cytoskeleton > spindle pole. In prometaphase cells, but not in anaphase cells, localizes at centromeres. During mitosis, also found at spindle poles. Centromeric localization requires the presence of SGOL2.

Images



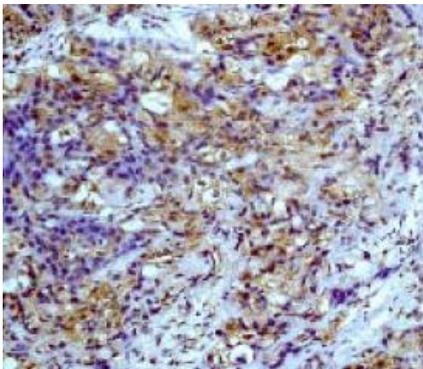
Western blot - Anti-PP2A alpha + beta antibody [Y119] (ab32141)

Anti-PP2A alpha + beta antibody [Y119] (ab32141) at 1/10000 dilution + T47-D cell lysate

Predicted band size: 35 kDa

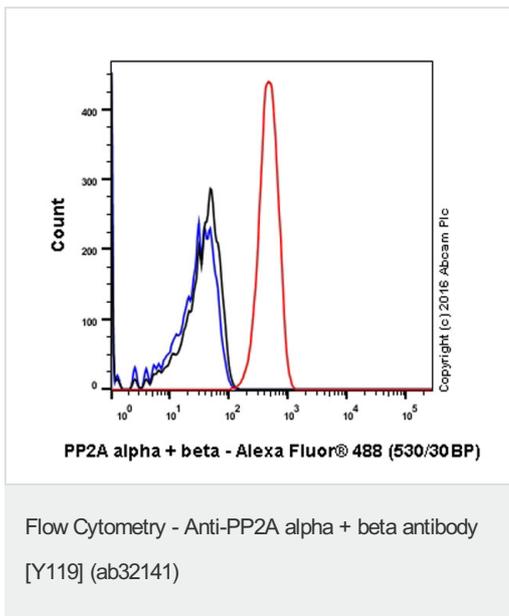
Observed band size: 36 kDa

[why is the actual band size different from the predicted?](#)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PP2A alpha + beta antibody [Y119] (ab32141)

ab32141, at a 1/250 dilution, staining human breast carcinoma by immunohistochemistry, Paraffin embedded tissue



Flow cytometry analysis of HeLa (human cervix adenocarcinoma) cells labelling PP2A alpha + beta (red) with unpurified ab32141 at dilution of 1/20. Goat anti rabbit IgG (Alexa Fluor® 488) at 1/2000 was used as the secondary antibody. Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Isotype control antibody was Rabbit monoclonal IgG (black). The blue line shows cells without incubation with primary and secondary antibodies.

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