SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Rabbit Anti-PP2A alpha + beta antibody

SL0029R

Product Name	PP2A alpha + beta
Chinese Name	蛋白质磷酸酶-2A 抗体
Alias	PP2A; PP2A alpha; PP-2A; PP2A C; PP2Ac; PP2CA; PPP2CA; PP2Calpha; RP-C; Protein phosphatase 2, catalytic subunit, alpha isoform; Replication protein C; RP C; PP2AA_HUMAN. PP2A-Cα/β; PP2A-C α/β; PP2A-C α + β; PP2A-C α+β.
Research Area	Cell biology immunology Signal transduction Cyclin Kinases and Phosphatases
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human, Mouse, Rat, (predicted: Chicken, Dog, Pig, Cow, Rabbit,)
Applications	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1ug/Test （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	34kDa
Cellular localization	The nucleus cytoplasmic
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human PP-2A: 205-309/309
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed

This gene encodes the phosphatase 2A catalytic subunit. Protein phosphatase 2A is one of the four major Ser/Thr phosphatases, and it is implicated in the negative control of cell growth and division. It consists of a common heteromeric core enzyme, which is composed of a catalytic subunit and a constant regulatory subunit, that associates with a variety of regulatory subunits. This gene encodes an alpha isoform of the catalytic subunit. [provided by RefSeq, Jul 2008].
This antibody is crosed with PP-2A subunit A,B.

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'.

Product Detail

Subunit:
PP2A consists of a common heterodimeric core enzyme, composed of PPP2CA a 36 kDa catalytic subunit (subunit C) and PPP2R1A a 65 kDa constant regulatory subunit (PR65 or subunit A), that associates with a variety of regulatory subunits. Proteins that associate with the core dimer include three families of regulatory subunits B (the R2/B/PR55/B55, R3/B"/PR72/PR130/PR59 and R5/B'/B56 families), the 48 kDa variable regulatory subunit, viral proteins, and cell signaling molecules. Interacts with NXN; the interaction is direct (By similarity). Interacts with TP53, SGOL1 and SGOL2. Interacts with AXIN1; the interaction dephosphorylates AXIN1. Interacts with PIM3; this interaction promotes dephosphorylation, ubiquitination and proteasomal degradation of PIM3. Interacts with RAF1.

Subcellular Location:
Cytoplasm. Nucleus. Chromosome, centromere. Cytoplasm, cytoskeleton, spindle pole. Note=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 (By similarity).

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.

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

SWISS:
P67775

Gene ID:
5515

Database links:

Entrez Gene: 416318 Chicken

Entrez Gene: 282320 Cow

Entrez Gene: 5515 Human

Entrez Gene: 19052 Mouse

Entrez Gene: 397656 Pig

Entrez Gene: 100009252 Rabbit

Entrez Gene: 24672 Rat

Omim: 176915 Human

SwissProt: P48463 Chicken

SwissProt: P67774 Cow

SwissProt: P67775 Human

SwissProt: P63330 Mouse

SwissProt: P67776 Pig

SwissProt: P67777 Rabbit

SwissProt: P63331 Rat

Unigene: 105818 Human

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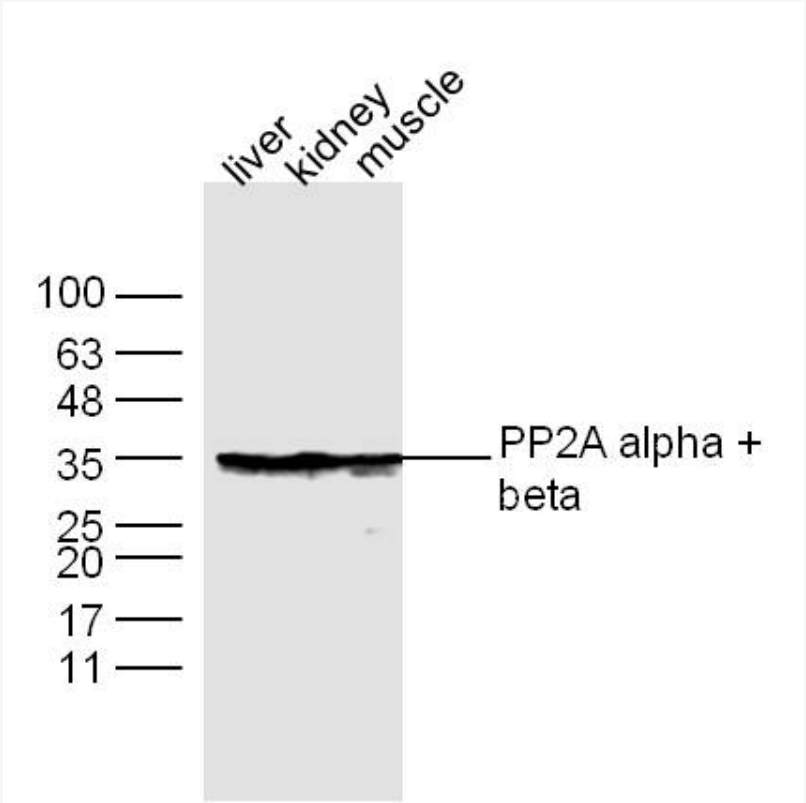
Unigene: 260288 Mouse

Unigene: 1271 Rat

Kinases and Phosphatases（Kinases and Phosphatases） PP-2A (protein phosphatase 2A catalytic subunit；PP2A alpha；)参与酵母细胞及两栖类卵母细胞有丝分裂的蛋白丝/苏氨酸磷酸酶。
此酶的表达与细胞周期调节有关。此抗体与 PP-2A subunit A,B,C 均有 React Species。

Product Picture



Sample:

Liver (Mouse) Lysate at 30 ug

Kidney (Mouse) Lysate at 30 ug

Muscle (Mouse) Lysate at 30 ug

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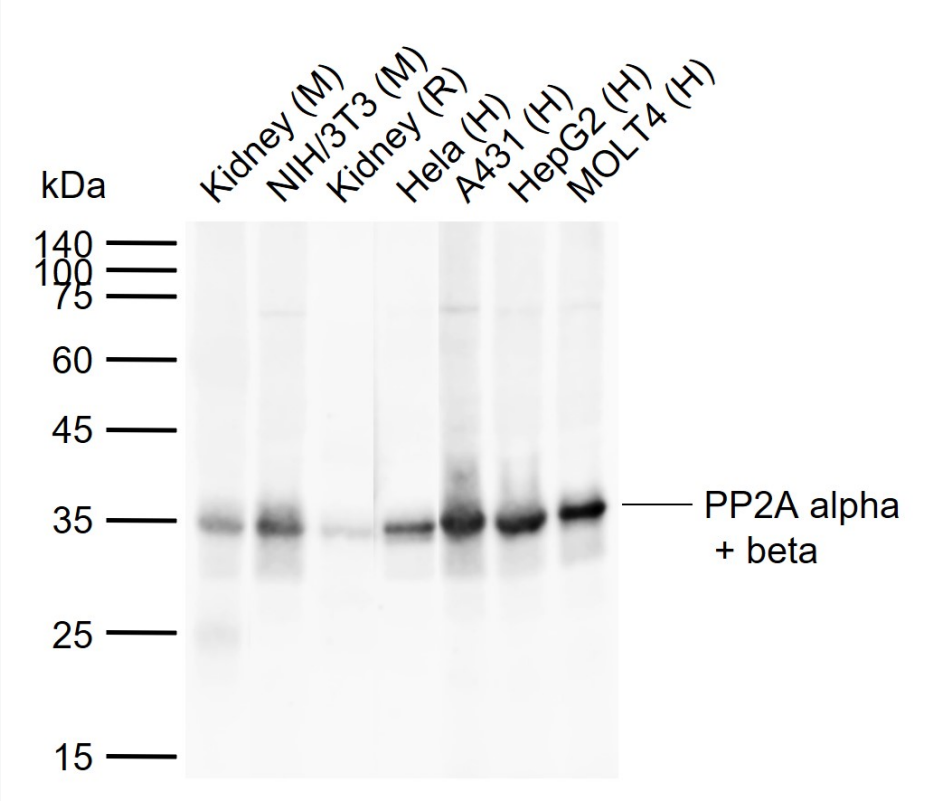
Primary: Anti- PP2A alpha + beta (SL0029R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 34 kD

Observed band size: 34 kD



Sample:

Lane 1: Mouse Kidney tissue lysates

Lane 2: Mouse NIH/3T3 cell lysates

Lane 3: Rat Kidney tissue lysates

Lane 4: Human Hela cell lysates

Lane 5: Human A431 cell lysates

Lane 6: Human HepG2 cell lysates

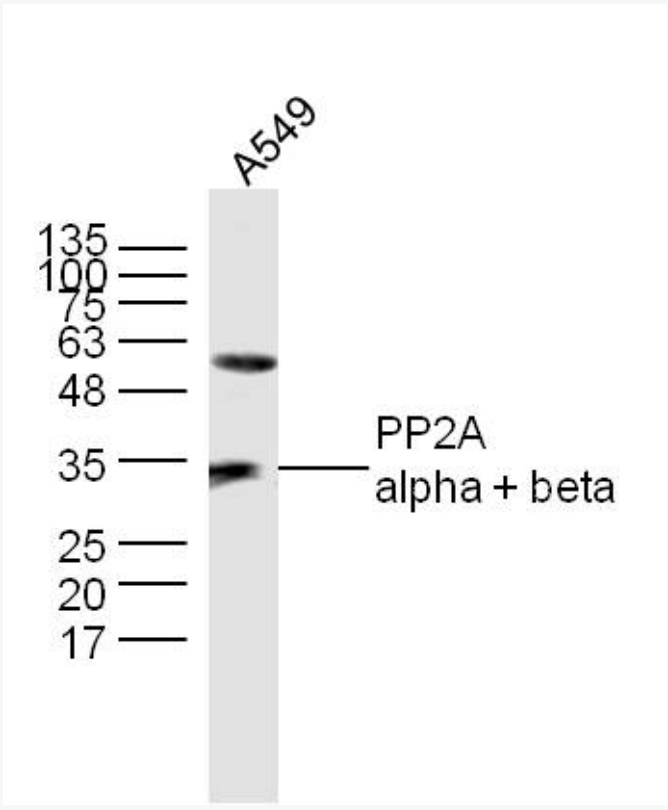
Lane 7: Human MOLT4 cell lysates

Primary: Anti-PP2A alpha + beta (SL0029R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 34 kDa

Observed band size: 34 kDa



Sample:

A549 Cell (Human) Lysate at 30 ug

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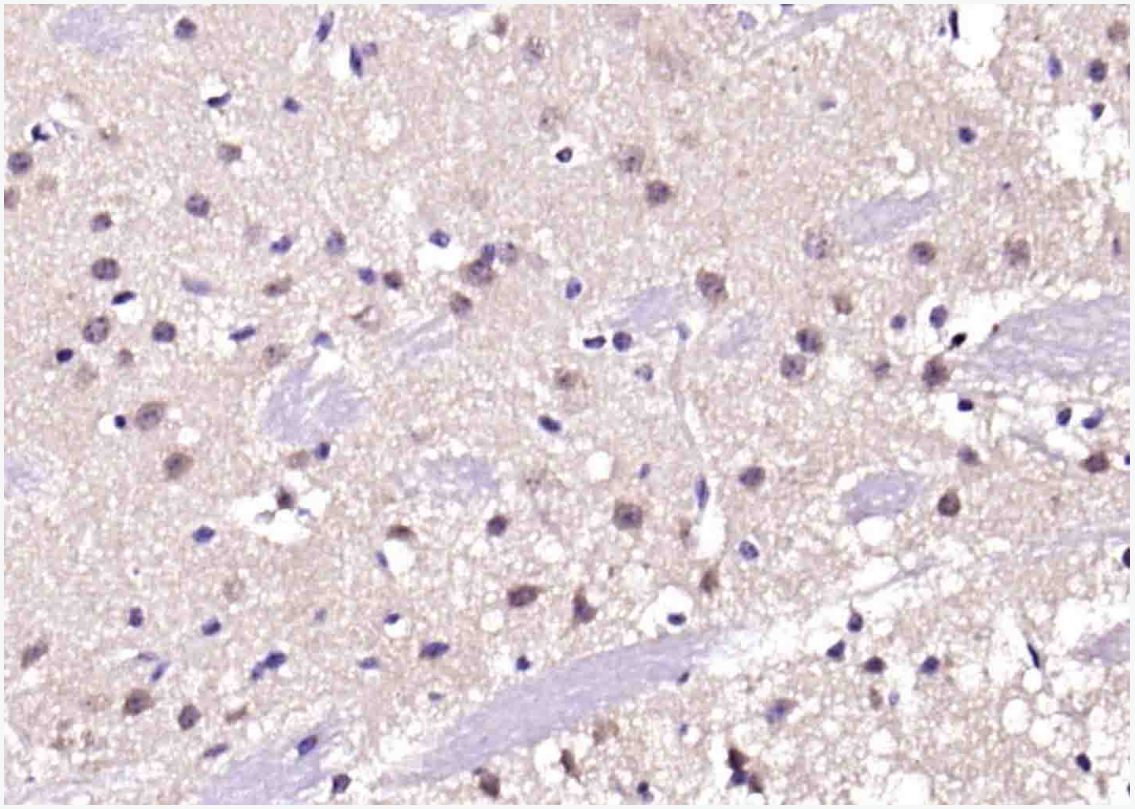
Primary: Anti-PP2A alpha + beta (Bs- 0029R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

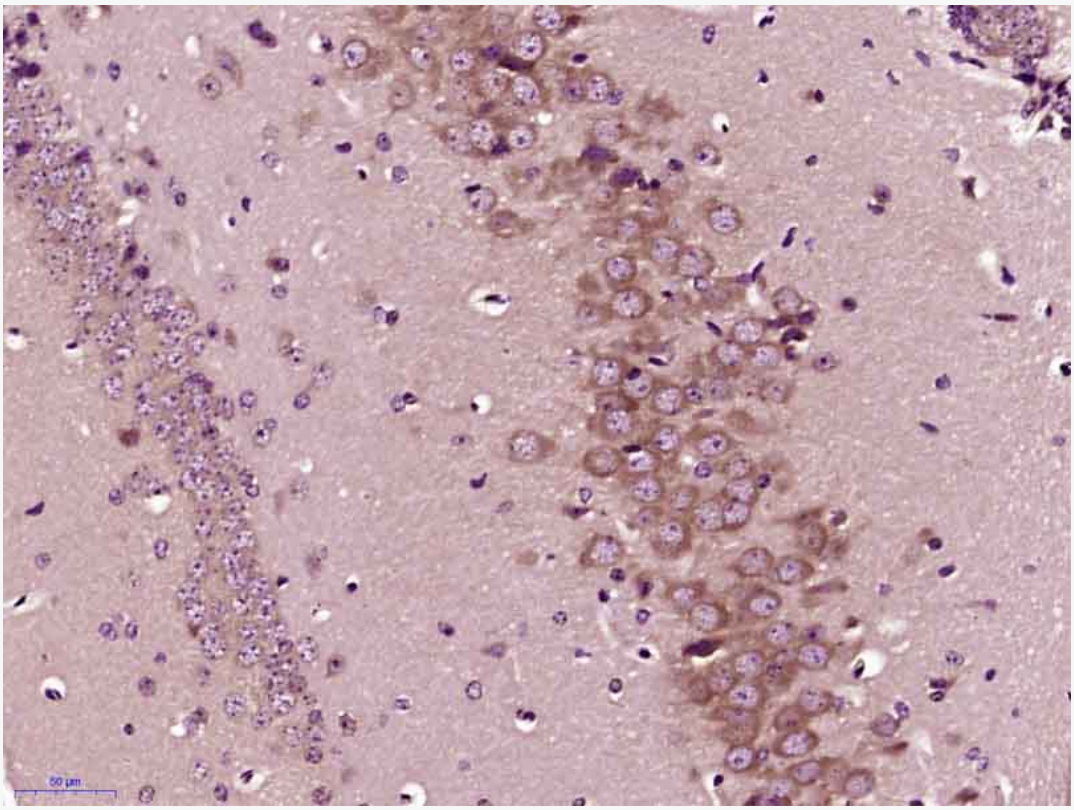
Predicted band size: 34 kD

Observed band size: 34 kD



Paraformaldehyde-fixed, paraffin embedded (mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PP2A alpha + beta) Polyclonal Antibody, Unconjugated (SL0029R) at 1:200 overnight at 4°C, followed by operating according

to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PP2A alpha + beta) Polyclonal Antibody, Unconjugated (SL0029R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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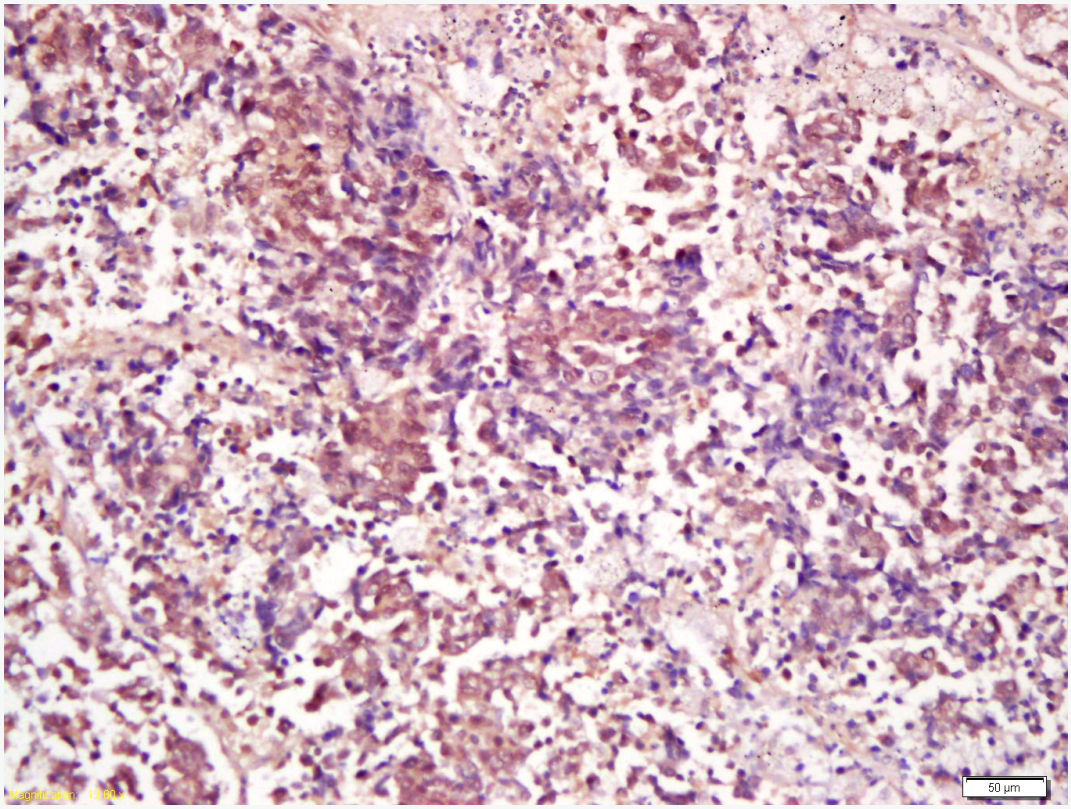
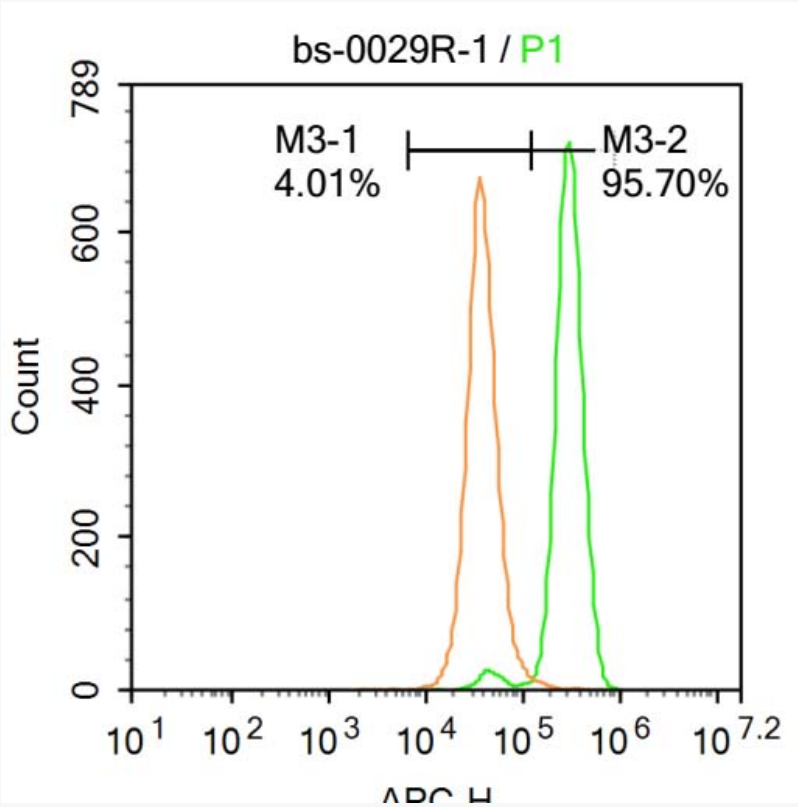


Tissue/cell: human lung carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;

Incubation: Anti-PP2A alpha+beta Polyclonal Antibody, Unconjugated(SL0029R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Blank control: A431.

Primary Antibody (green line): Rabbit Anti-PP2A alpha + beta antibody (SL0029R)

Dilution: 1μg /10^6 cells;

Isotype Control Antibody (orange line): Rabbit IgG .

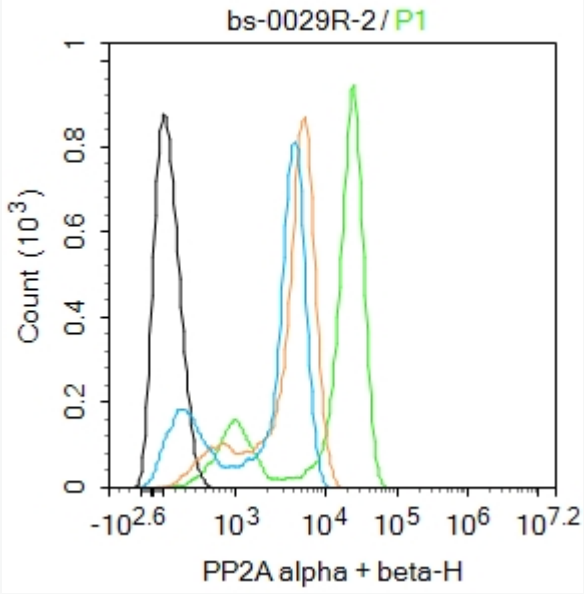
Secondary Antibody : Goat anti-rabbit IgG-AF647

Dilution: 1μg /test.

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at-20℃. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at at room

temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



Blank control: Hela.

Primary Antibody (green line): Rabbit Anti-PP2A alpha + beta antibody (SL0029R)

Dilution: 2ug/Test;

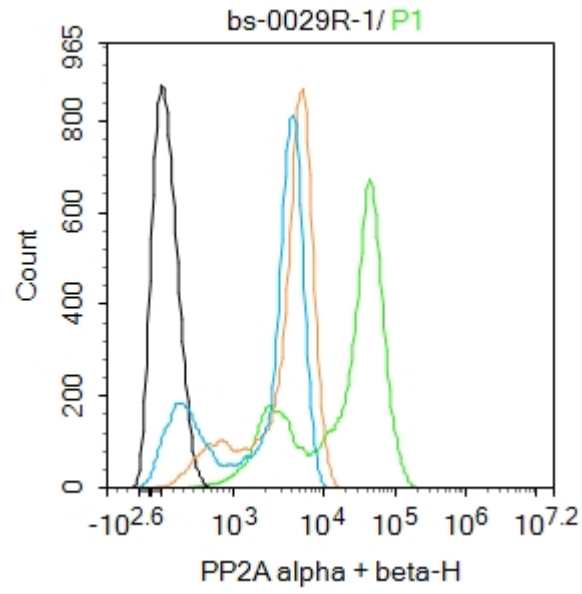
Secondary Antibody : Goat anti-rabbit IgG-FITC

Dilution: 0.5ug/Test.

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at -20℃.The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room

temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



Blank control: Hela.

Primary Antibody (green line): Rabbit Anti-PP2A alpha + beta antibody (SL0029R)

Dilution: 1ug/Test;

Secondary Antibody : Goat anti-rabbit IgG-FITC

Dilution: 0.5ug/Test.

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at -20℃.The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room

temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.