

Mouse PP2A-alpha/PPP2CA Monoclonal Antibody | anti-PPP2CA antibody

Anti-PP2A-alpha/PPP2CA Antibody (monoclonal, 3B6)

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA19366	Mouse	Human, Monkey, Mouse, Rat	Western Blot, Immunohistochemistry, Immunocytochemistry, Immunofluorescence, Flow Cytometry, Functional Assay

PRODUCT SYNONYMS

PP2A-alpha/PPP2CA; Monoclonal Antibody; Anti-PP2A-alpha/PPP2CA Antibody (monoclonal; 3B6); Serine/threonine-protein phosphatase 2A catalytic subunit alpha isoform; PP2A-alpha; Replication protein C; RP-C; PPP2CA; protein phosphatase 2; catalytic subunit; alpha isozyme; anti-PPP2CA antibody

PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human, Monkey, Mouse, Rat
Clonality	Monoclonal
Isotype	Mouse IgG2a
Clone Number	3B6
Specificity	Mouse IgG monoclonal antibody for PP2A-alpha/PPP2CA detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
Applicable Applications for anti-PPP2CA antibody	WB (Western Blot), IHC (Immunohistochemistry), ICC (Immunocytochemistry), IF (Immunofluorescence), FCM/FACS (Flow Cytometry)
Application Notes	WB: 0.1-0.5ug/ml Human, Monkey, Mouse, Rat IHC-P: 0.5-1ug/ml Human, Rat ICC/IF: 4ug/ml Human FC/FACS/FCM: 1-3ug/1x106 cells Human
Immunogen	E Coli-derived human PP2A-alpha recombinant protein (Position: M1-L309). Human PP2A-alpha shares 100% amino acid (aa) sequence identity with both mouse and rat PP2A-alpha.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



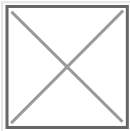
IHC (Immunohistochemistry)

Figure 6. IHC analysis of PP2A-alpha/PPP2CA using anti-PP2A-alpha/PPP2CA antibody (AAA19366).PP2A-alpha/PPP2CA was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1μg/ml mouse anti-PP2A-alpha/PPP2CA Antibody (AAA19366) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen.



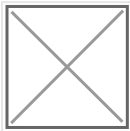
IHC (Immunohistochemistry)

Figure 5. IHC analysis of PP2A-alpha/PPP2CA using anti-PP2A-alpha/PPP2CA antibody (AAA19366).PP2A-alpha/PPP2CA was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1μg/ml mouse anti-PP2A-alpha/PPP2CA Antibody (AAA19366) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen.



IHC (Immunohistochemistry)

Figure 4. IHC analysis of PP2A-alpha/PPP2CA using anti-PP2A-alpha/PPP2CA antibody (AAA19366).PP2A-alpha/PPP2CA was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1μg/ml mouse anti-PP2A-alpha/PPP2CA Antibody (AAA19366) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen.



FCM (Flow Cytometry)

Figure 3. Flow Cytometry analysis of U937 cells using anti-PP2A-alpha/PPP2CA antibody (AAA19366).Overlay histogram showing U937 cells stained with AAA19366 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti- PP2A-alpha/PPP2CA Antibody (AAA19366, 1μg/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10μg/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was mouse IgG (1μg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



IF (Immunofluorescence)

Figure 2. IF analysis of PP2A-alpha/PPP2CA using anti- PP2A-alpha/PPP2CA antibody (AAA19366).PP2A-alpha/PPP2CA was detected in immunocytochemical section of HELA cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 4μg/mL mouse anti- PP2A-alpha/PPP2CA Antibody (AAA19366) overnight at 4 degree C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



WB (Western Blot)

Figure 1. Western blot analysis of PP2A-alpha/PPP2CA using anti-PP2A-alpha/PPP2CA antibody (AAA19366).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.Lane 1: human HELA whole cell lysatesLane 2: human HEPG2 whole cell lysatesLane 3: monkey COS-7 whole cell lysatesLane 4: rat PC-12 whole cell lysatesLane 5: mouse NIH/3T3 whole cell lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1. 5 hour at RT. The membrane was incubated with mouse anti- PP2A-alpha/PPP2CA antigen affinity purified monoclonal antibody (Catalog # AAA19366) at 0. 5 μg/mL overnight at 4 degree C, then washed with TBS-0. 1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1. 5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # with Tanon 5200 system. A specific band was detected for PP2A-alpha/PPP2CA at approximately 36KD. The expected band size for PP2A-alpha/PPP2CA is at 36KD.

ADDITIONAL INFORMATION

Related Product Information for anti-PPP2CA antibody

The catalytic subunit of human protein phosphatase 2A (PPP2CA) encodes a 309-amino acid polypeptide. It is localized to chromosome 5. The gene (approximately 30 kbp) is composed of seven exons and six introns. It is predicted to be important for phosphatase enzymatic activity. Methylation of the C-terminal leucine residue (Leu309) of protein serine/threonine phosphatase 2A catalytic subunit (PP2AC) is known to regulate catalytic activity in vitro. Furthermore, PP2A has a fundamental role in cardiac function, and suggests that disturbances in protein phosphatase expression and activity may cause or exacerbate the course of cardiac diseases.

References	1. Stone SR, Mayer R, Wernet W, Maurer F, Hofsteenge J, Hemmings BA. The nucleotide sequence of the cDNA encoding the human lung protein phosphatase 2A alpha catalytic subunit. Nucleic Acids Res. 1988 Dec 9; 16(23):11365. 2. Jones TA, Barker HM, da Cruz e Silva EF, Mayer-Jaekel RE, Hemmings BA, Spurr NK, Sheer D, Cohen PT. Localization of the genes encoding the catalytic subunits of protein phosphatase 2A to human chromosome bands 5q23-->q31 and 8p12-->p11. 2, respectively. Cytogenet Cell Genet. 1993; 63(1):35-41. 3. Khew-Goodall Y, Mayer RE, Maurer F, Stone SR, Hemmings BA. Structure and transcriptional regulation of protein phosphatase 2A catalytic subunit genes. Biochemistry. 1991 Jan 8; 30(1):89-97. 4. Arino J, Woon CW, Brautigan DL, Miller TB Jr, Johnson GL. Human liver phosphatase 2A: cDNA and amino acid sequence of two catalytic subunit isotypes. Proc Natl Acad Sci U S A. 1988 Jun; 85(12):4252-6. 5. Bryant JC, Westphal RS, Wadzinski BE. Methylated C-terminal leucine residue of PP2A catalytic subunit is important for binding of regulatory Balph subunit. Biochem J. 1999 Apr 15; 339 (Pt 2):241-6. 6. Gergs U, Boknik P, Buchwalow I, Fabritz L, Matus M, Justus I, Hanske G, Schmitz W, Neumann J. Overexpression of the catalytic subunit of protein phosphatase 2A impairs cardiac function. J Biol Chem. 2004 Sep 24; 279(39):40827-34.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4506017
NCBI GeneID	5515
NCBI Accession #	NP_002706.1
NCBI GenBank Nucleotide #	NM_002715.2
UniProt Accession #	P67775; P05323; P13197
Molecular Weight	35,594 Da
NCBI Official Full Name	serine/threonine-protein phosphatase 2A catalytic subunit alpha isoform
NCBI Official Synonym Full Names	protein phosphatase 2, catalytic subunit, alpha isozyme
NCBI Official Symbol	PPP2CA
NCBI Official Synonym Symbols	RP-C; PP2Ac; PP2CA; PP2Calpha
NCBI Protein Information	serine/threonine-protein phosphatase 2A catalytic subunit alpha isoform; PP2A-alpha; replication protein C; protein phosphatase 2A catalytic subunit, alpha isoform; protein phosphatase 2 (formerly 2A), catalytic subunit, alpha isoform; serine/threonine pr
UniProt Protein Name	Serine/threonine-protein phosphatase 2A catalytic subunit alpha isoform
UniProt Gene Name	PPP2CA
UniProt Synonym Gene Names	PP2A-alpha; RP-C
UniProt Entry Name	PP2AA_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/monoclonal/pp2a-alpha-ppp2ca-antibody-clone-3b6-western-blot-immunohistochemistry-immunocytochemistry-immunofluorescence-flow-cytometry-elisa/19366>