PP2A Alpha Antibody (N-Term) Blocking Peptide

PRODUCT OVERVIEW

Product Name	PP2A alpha (PPP2CA), Blocking Peptide
Full Product Name	PP2A alpha Antibody (N-term) Blocking peptide
Product Gene Name	PPP2CA blocking peptide
Product Synonym Names	Serine/threonine-protein phosphatase 2A catalytic subunit alpha isoform; PP2A-alpha; Replication protein C; RP-C; PPP2CA
Form/Format	The synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml deionized water for a final concentration of 1 mg/ml.
Specificity	The synthetic peptide sequence used to generate the antibody was selected from the N-term region of human PPP2CA/B. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	PP2A alpha peptide (MBS9227654) is used for blocking the activity of PP2A alpha antibody (MBS9211926)
Molecular Weight	29,735 Da
OMIM	176915
Cellular 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).
Related Product Information for PPP2CA blocking peptide	PP2A is the major phosphatase for microtubule-associated proteins (MAPs). 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. Activates RAF1 by dephosphorylating it at 'Ser-259'.
Other Notes	Small volumes of PPP2CA blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PPP2CA purchase	MBS9227654 is a blocking peptide targeting PPP2CA. Also known as PP2A alpha Antibody (N-term) Blocking peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PPP2CA. It may not necessarily be applicable to this product.

NCBI GI #	54038809
NCBI GeneID	5515
NCBI Accession #	P67775.1
UniProt Primary Accession #	P67775
UniProt Secondary Accession #	P05323; P13197
UniProt Related Accession #	P67775
NCBI Official Full Name	Serine/threonine-protein phosphatase 2A catalytic subunit alpha isoform

NCBI Official Synonym Full Names	protein phosphatase 2 catalytic subunit alpha
NCBI Official Symbol	PPP2CA
NCBI Official Synonym Symbols	RP-C; PP2Ac; PP2CA; PP2Calpha
UniProt Protein Name	Serine/threonine-protein phosphatase 2A catalytic subunit alpha isoform
UniProt Synonym Protein Names	Replication protein C; RP-C
Protein Family	Serine/threonine-protein phosphatase
UniProt Gene Name	PPP2CA
UniProt Synonym Gene Names	PP2A-alpha; RP-C
UniProt Entry Name	PP2AA_HUMAN
NCBI Protein Information	serine/threonine-protein phosphatase 2A catalytic subunit alpha isoform
NCBI Summary for PPP2CA	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]
UniProt Comments for PPP2CA	PPP2CA: ubiquitous cytosolic Ser/Thr protein phosphatase, catalytic subunit. The holoenzyme consists of a 36 kDa catalytic subunit (subunit C) and 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. Protein type: EC 3.1.3.16; Motility/polarity/chemotaxis; Protein phosphatase, Ser/Thr (non-receptor) Chromosomal Location of Human Ortholog: 5q31.1 Cellular Component: cytosol; protein phosphatase type 2A complex Molecular Function: protein binding Biological Process: apoptosis; mitotic nuclear envelope reassembly; mRNA catabolic process, nonsense-mediated decay; protein amino acid dephosphorylation
Research Articles on PPP2CA	**1.** Data show that the protein phosphatase 2A (PP2A)/c-jun N-Terminal Kinase (JNK)/Sp1 transcription factor/CDK1 kinase pathway and the autophagy/cyclin kinase inhibitor p21 pathway participated in G2/M cell cycle arrest triggered by PP2A inhibitors.
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