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PPP2CA Blocking Peptide (Center)

Synthetic peptide
Catalog # BP20181c

Specification

PPP2CA Blocking Peptide (Center) - Product Information

Primary Accession	P67775
Other Accession	P23696, P63331, P67777, P67776, P63330, P67774, NP_002706.1

PPP2CA Blocking Peptide (Center) - Additional Information

Gene ID 5515

Other Names
Serine/threonine-protein phosphatase 2A catalytic subunit alpha isoform, PP2A-alpha, Replication protein C, RP-C, PPP2CA

Target/Specificity
The synthetic peptide sequence is selected from aa 103-116 of HUMAN PPP2CA

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PPP2CA Blocking Peptide (Center) - Protein Information

Name PPP2CA

Function
PP2A is the major phosphatase for microtubule-associated proteins (MAPs) (PubMed:22613722). PP2A can modulate the activity of phosphorylase B kinase casein kinase 2, mitogen-stimulated S6 kinase, and MAP-2 kinase (PubMed:22613722). Cooperates with SGO2 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 (PubMed:17245430). Activates RAF1 by dephosphorylating it at 'Ser-259' (PubMed:10801873). Mediates dephosphorylation of WEE1, preventing its ubiquitin-mediated proteolysis, increasing WEE1 protein levels, and promoting the G2/M checkpoint (PubMed:<a

href="http://www.uniprot.org/citations/33108758" target="_blank">33108758). Mediates dephosphorylation of MYC; promoting its ubiquitin-mediated proteolysis: interaction with AMBRA1 enhances interaction between PPP2CA and MYC (PubMed:25438055). Mediates dephosphorylation of FOXO3; promoting its stabilization: interaction with AMBRA1 enhances interaction between PPP2CA and FOXO3 (PubMed:30513302). Catalyzes dephosphorylation of the pyrin domain of NLRP3, promoting assembly of the NLRP3 inflammasome (By similarity).

Cellular Location
Cytoplasm. Nucleus. Chromosome, centromere. Cytoplasm, cytoskeleton, spindle pole. Note=In prometaphase cells, but not in anaphase cells, localizes at centromeres (PubMed:16541025). During mitosis, also found at spindle poles (PubMed:16541025). Centromeric localization requires the presence of SGO2 (By similarity) {ECO:0000250|UniProtKB:P63330, ECO:0000269|PubMed:16541025}

PPP2CA Blocking Peptide (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

PPP2CA Blocking Peptide (Center) - Images

PPP2CA Blocking Peptide (Center) - Background

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.

PPP2CA Blocking Peptide (Center) - References

Shimada, M., et al. Hum. Genet. 128(4):433-441(2010)
Jayadeva, G., et al. J. Biol. Chem. 285(39):29863-29873(2010)
Pradhan, S., et al. J. Biol. Chem. 285(38):29059-29068(2010)
Schmitz, M.H., et al. Nat. Cell Biol. 12(9):886-893(2010)
Antony, R., et al. J. Biol. Chem. 285(24):18301-18308(2010)