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PPP1CC Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16979b

Specification

PPP1CC Antibody (C-term) - Product Information

Application	**WB,E**
Primary Accession	P36873
Other Accession	P63088, P63087, P61287, NP_002701.1
Reactivity	**Human**
Predicted	**Bovine, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**36984**
Antigen Region	**281-309**

PPP1CC Antibody (C-term) - Additional Information

Gene ID 5501

Other Names
Serine/threonine-protein phosphatase PP1-gamma catalytic subunit, PP-1G, Protein phosphatase 1C catalytic subunit, PPP1CC

Target/Specificity
This PPP1CC antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 281-309 amino acids from the C-terminal region of human PPP1CC.

Dilution
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
PPP1CC Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

PPP1CC Antibody (C-term) - Protein Information

Name PPP1CC

Function Protein phosphatase that associates with over 200 regulatory proteins to form highly specific holoenzymes which dephosphorylate hundreds of biological targets (PubMed:17936702, PubMed:25012651). Protein phosphatase 1 (PP1) is essential for cell division, and participates in the regulation of glycogen metabolism, muscle contractility and protein synthesis. Dephosphorylates RPS6KB1 (PubMed:17936702). Involved in regulation of ionic conductances and long-term synaptic plasticity. May play an important role in dephosphorylating substrates such as the postsynaptic density- associated Ca(2+)/calmodulin dependent protein kinase II. Component of the PTW/PP1 phosphatase complex, which plays a role in the control of chromatin structure and cell cycle progression during the transition from mitosis into interphase (PubMed:20516061). In balance with CSNK1D and CSNK1E, determines the circadian period length, through the regulation of the speed and rhythmicity of PER1 and PER2 phosphorylation (PubMed:21712997). May dephosphorylate CSNK1D and CSNK1E (By similarity). Regulates the recruitment of the SKA complex to kinetochores (PubMed:28982702). Dephosphorylates the 'Ser-418' residue of FOXP3 in regulatory T-cells (Treg) from patients with rheumatoid arthritis, thereby inactivating FOXP3 and rendering Treg cells functionally defective (PubMed:23396208). Together with PPP1CA (PP1- alpha subunit), dephosphorylates IFIH1/MDA5 and RIG-I leading to their activation and a functional innate immune response (PubMed:23499489). Core component of the SHOC2-MRAS-PP1c (SMP) holophosphatase complex that regulates the MAPK pathway activation (PubMed:35768504, PubMed:35831509). The SMP complex specifically dephosphorylates the inhibitory phosphorylation at 'Ser-259' of RAF1 kinase, 'Ser-365' of BRAF kinase and 'Ser-214' of ARAF kinase, stimulating their kinase activities (PubMed:35768504, PubMed:35831509). Dephosphorylates MKI67 at the onset of anaphase (PubMed:25012651). The SMP complex enhances the dephosphorylation activity and substrate specificity of PP1c (PubMed:35768504, PubMed:35831509).

Cellular Location
Cytoplasm. Nucleus. Nucleus, nucleolus. Nucleus, nucleoplasm. Nucleus speckle. Chromosome, centromere, kinetochore. Cleavage furrow. Midbody Mitochondrion. Cytoplasm, cytoskeleton, microtubule organizing center Note=Colocalizes with SPZ1 in the nucleus (By similarity). Colocalizes with URI1 at mitochondrion (PubMed:17936702). Rapidly exchanges between the nucleolar, nucleoplasmic and cytoplasmic compartments (PubMed:11739654). Highly mobile in cells and can be relocalized through interaction with targeting subunits (PubMed:17965019). In the presence of PPP1R8 relocalizes from the nucleolus to nuclear speckles (PubMed:11739654). Shows a dynamic targeting to specific sites throughout the cell cycle (PubMed:12529430). Highly concentrated in nucleoli of interphase cells and localizes at kinetochores early in mitosis (PubMed:12529430). Relocalization to chromosome-containing regions occurs at the transition from early to late anaphase (PubMed:12529430). Also accumulates at the cleavage furrow and midbody by telophase (PubMed:12529430). Colocalizes with DYNLT4 in the microtubule organizing center (MTOC) (PubMed:23789093) {ECO:0000250|UniProtKB:P63087, ECO:0000269|PubMed:11739654, ECO:0000269|PubMed:12529430, ECO:0000269|PubMed:17936702, ECO:0000269|PubMed:17965019, ECO:0000269|PubMed:23789093}

PPP1CC Antibody (C-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PPP1CC Antibody (C-term) - Images

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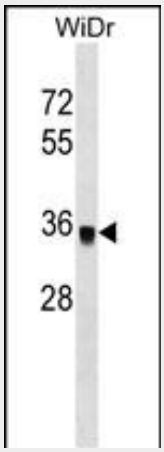
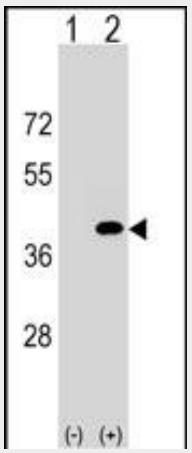


PPP1CC Antibody (C-term) (Cat. #AP16979b) western blot analysis in WiDr cell line lysates (35ug/lane).This demonstrates the PPP1CC antibody detected the PPP1CC protein (arrow).



Western blot analysis of PPP1CC (arrow) using rabbit polyclonal PPP1CC Antibody (C-term) (Cat. #AP16979b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the PPP1CC gene.

PPP1CC Antibody (C-term) - Background

Protein phosphatase 1 (PP1) is essential for cell division, and participates in the regulation of glycogen metabolism, muscle contractility and protein synthesis. Involved in regulation of ionic conductances and long-term synaptic plasticity. May play an important role in dephosphorylating substrates such as the postsynaptic density-associated Ca(2+)/calmodulin dependent protein kinase II.

PPP1CC Antibody (C-term) - References

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Rogne, M., et al. Hum. Mol. Genet. 18(5):978-987(2009)
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