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PPP2R1A Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP1943a

Specification

PPP2R1A Antibody (N-term) Blocking Peptide - Product Information

Primary Accession	P30153
Other Accession	Q96DH3

PPP2R1A Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 5518

Other Names
Serine/threonine-protein phosphatase 2A 65 kDa regulatory subunit A alpha isoform, Medium tumor antigen-associated 61 kDa protein, PP2A subunit A isoform PR65-alpha, PP2A subunit A isoform R1-alpha, PPP2R1A

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP1943a was selected from the N-term region of human PPP2R1A. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

PPP2R1A Antibody (N-term) Blocking Peptide - Protein Information

Name PPP2R1A (HGNC:9302)

Function
The PR65 subunit of protein phosphatase 2A serves as a scaffolding molecule to coordinate the assembly of the catalytic subunit and a variable regulatory B subunit (PubMed:15525651, PubMed:16580887, PubMed:33243860, PubMed:33633399, PubMed:34004147, PubMed:8694763). Upon interaction with GNA12 promotes dephosphorylation of microtubule associated protein TAU/MAPT

(PubMed:15525651). Required for proper chromosome segregation and for centromeric localization of SGO1 in mitosis (PubMed:16580887). Together with RACK1 adapter, mediates dephosphorylation of AKT1 at 'Ser-473', preventing AKT1 activation and AKT-mTOR signaling pathway (By similarity). Dephosphorylation of AKT1 is essential for regulatory T-cells (Treg) homeostasis and stability (By similarity). Part of the striatin-interacting phosphatase and kinase (STRIPAK) complexes (PubMed:18782753, PubMed:33633399). STRIPAK complexes have critical roles in protein (de)phosphorylation and are regulators of multiple signaling pathways including Hippo, MAPK, nuclear receptor and cytoskeleton remodeling (PubMed:18782753, PubMed:33633399). Different types of STRIPAK complexes are involved in a variety of biological processes such as cell growth, differentiation, apoptosis, metabolism and immune regulation (PubMed:18782753, PubMed:33633399). Key mediator of a quality checkpoint during transcription elongation as part of the Integrator-PP2A (INTAC) complex (PubMed:33243860, PubMed:34004147). The INTAC complex drives premature transcription termination of transcripts that are unfavorably configured for transcriptional elongation: within the INTAC complex, acts as a scaffolding subunit for PPP2CA, which catalyzes dephosphorylation of the C-terminal domain (CTD) of Pol II subunit POLR2A/RPB1 and SUPT5H/SPT5, thereby preventing transcriptional elongation (PubMed:33243860, PubMed:34004147). Regulates the recruitment of the SKA complex to kinetochores (PubMed:28982702).

Cellular Location
Cytoplasm {ECO:0000250|UniProtKB:Q32PI5}. Nucleus. Chromosome. Chromosome, centromere. Lateral cell membrane. Cell projection, dendrite. Note=Centromeric localization requires the presence of BUB1 (PubMed:16580887). Recruited to chromatin and transcription pause-release checkpoint via its association with the Integrator complex (PubMed:34004147, PubMed:33243860)

PPP2R1A Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

PPP2R1A Antibody (N-term) Blocking Peptide - Images

PPP2R1A Antibody (N-term) Blocking Peptide - Background

PPP2R1A is a constant regulatory subunit of protein phosphatase 2. Protein phosphatase 2 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. The constant regulatory subunit A serves as a scaffolding molecule to coordinate the assembly of the catalytic subunit and a variable regulatory B subunit.

PPP2R1A Antibody (N-term) Blocking Peptide - References

Suzuki, K., et al., Int. J. Oncol. 23(5):1263-1268 (2003).Elder, R.T., et al., Virology 287(2):359-370 (2001).Ruteshouser, E.C., et al., Oncogene 20(16):2050-2054 (2001).Hrimech, M., et al., EMBO J.

19(15):3956-3967 (2000).Zolnierowicz, S., Biochem. Pharmacol. 60(8):1225-1235 (2000).