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PPP2R1A Antibody(C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19717b

Product Information

Application	WB, E
Primary Accession	P30153
Other Accession	P54612, Q76MZ3, Q32PI5, NP_055040.2
Reactivity	Human
Predicted	Bovine, Mouse, Pig, Rat, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB41029
Calculated MW	65309
Antigen Region	454-481

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	This PPP2R1A antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 454-481 amino acids from the C-terminal region of human PPP2R1A.
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	PPP2R1A Antibody(C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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)

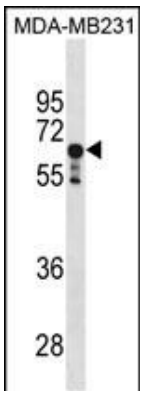
Background

This gene encodes 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. This gene encodes an alpha isoform of the constant regulatory subunit A. Alternatively spliced transcript variants have been described. [provided by RefSeq].

References

Jones, S., et al. Science 330(6001):228-231(2010)
Schmitz, M.H., et al. Nat. Cell Biol. 12(9):886-893(2010)
Heikkinen, P.T., et al. J. Biol. Chem. 285(6):3740-3749(2010)
Dupont, W.D., et al. Cancer 116(1):8-19(2010)
Wang, Q., et al. Neoplasia 11(10):1012-1021(2009)

Images



PPP2R1A Antibody (C-term) (Cat. #AP19717b) western blot analysis in MDA-MB231 cell line lysates (35ug/lane).This demonstrates the PPP2R1A antibody detected the PPP2R1A protein (arrow).

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